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(54) **ELECTRONIC DEVICE AND METHOD OF DISPLAYING INFORMATION IN RESPONSE TO A GESTURE**

(71) Applicant: **BlackBerry Limited**, Waterloo (CA)

(72) Inventors: **Michael George Langlois**, Almonte (CA); **Daniel Tobias Rydenhag**, Gothenburg (SE); **Margaret Elizabeth Kuo**, Kitchener (CA); **Daniel Johansson**, Malmö (SE)

(73) Assignee: **BlackBerry Limited**, Waterloo, Ontario (CA)

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G06F 3/0488	(2013.01)

(52) **U.S. Cl.**

CPC ***G06F 3/017*** (2013.01); ***G06F 3/04883*** (2013.01); ***G06F 3/04886*** (2013.01); ***H04M 1/72547*** (2013.01)

(58) **Field of Classification Search**

CPC .. G06F 3/04883; G06F 3/017; G06F 3/0481; G06F 3/0488; G06F 2203/04807; G06F 3/04886; H04M 1/72547

USPC 715/863

See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,305,435 A 4/1994 Bronson
5,570,109 A 10/1996 Jenson

(Continued)

FOREIGN PATENT DOCUMENTS

CN 1834887 9/2006
CN 101198925 6/2008

(Continued)

OTHER PUBLICATIONS

"User Guide" Samsung Epic 4G, A Galaxy S Phone, Sprint Oct. 8, 2010, pp. 268.

(Continued)

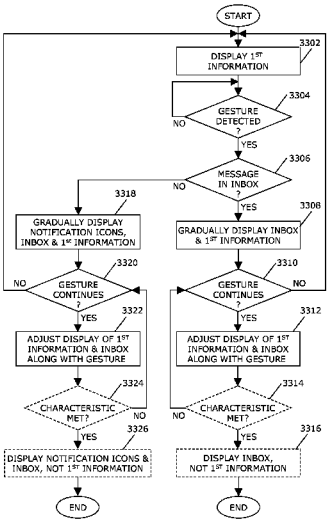
Primary Examiner — Jung-Mu Chuang

(74) *Attorney, Agent, or Firm* — Fish & Richardson P.C.

(57) **ABSTRACT**

A method includes displaying, on a display of an electronic device, first information and detecting a gesture on the touch-sensitive display, which gesture indicates a request to display an inbox associated with a plurality of applications. In response to detecting the gesture, when a message is received for a first application that is not one of the plurality of applications, a plurality of visual notification icons is displayed and at least part of the inbox is gradually displayed while reducing display of the first information along with movement of the gesture, wherein a first visual notification icon of the plurality of visual notification icons is associated with the first application.

20 Claims, 12 Drawing Sheets



(56) **References Cited**

U.S. PATENT DOCUMENTS

5,651,107 A 7/1997 Frank et al.
5,668,960 A 9/1997 Kataoka
5,949,408 A 9/1999 Kang
6,073,109 A 6/2000 Flores et al.
6,133,898 A * 10/2000 Ludolph et al. 715/790
6,333,973 B1 12/2001 Smith et al.
6,584,181 B1 6/2003 Aktas et al.
6,877,137 B1 4/2005 Rivette et al.
7,079,160 B2 7/2006 Colavin
7,243,130 B2 7/2007 Horvitz et al.
7,250,955 B1 7/2007 Beeman et al.
7,283,808 B2 10/2007 Castell et al.
7,308,653 B2 * 12/2007 Lin-Hendel 715/785
7,370,284 B2 * 5/2008 Andrea et al. 715/788
7,385,875 B2 6/2008 May et al.
7,430,409 B2 9/2008 Klassen et al.
7,479,949 B2 1/2009 Jobs
7,484,213 B2 1/2009 Mathew et al.
7,539,945 B2 5/2009 Conrad et al.
7,642,901 B2 1/2010 Kato et al.
7,647,559 B2 1/2010 Yozell-Epstein et al.
7,743,340 B2 6/2010 Horvitz et al.
7,752,279 B2 7/2010 Hardy et al.
7,774,418 B2 8/2010 Tang et al.
7,782,307 B2 8/2010 Westerman et al.
7,802,206 B1 9/2010 Davis et al.
7,809,162 B2 10/2010 Steinberg et al.
7,812,828 B2 10/2010 Westerman et al.
7,812,860 B2 10/2010 King et al.
7,826,641 B2 11/2010 Mandella et al.
7,844,076 B2 11/2010 Corcoran et al.
7,844,915 B2 * 11/2010 Platzer et al. 715/781
7,848,549 B2 12/2010 Steinberg et al.
7,860,274 B2 12/2010 Steinberg et al.
7,861,169 B2 12/2010 Hull et al.
7,884,846 B2 2/2011 Ferren et al.
7,899,915 B2 3/2011 Reisman
7,900,074 B2 3/2011 Reece et al.
7,904,828 B2 3/2011 Conrad et al.
7,937,672 B2 5/2011 Casto
7,996,045 B1 * 8/2011 Bauer et al. 455/566
8,020,105 B1 * 9/2011 Lemay H04L 51/36 709/227
8,032,482 B2 10/2011 Rosenberg et al.
8,032,597 B2 10/2011 Khoo
8,082,518 B2 * 12/2011 Flake et al. 715/786
8,099,681 B2 * 1/2012 Flanagan et al. 715/853
8,122,364 B2 2/2012 Yozell-Epstein et al.
8,134,727 B1 3/2012 Shmunis et al.
8,140,115 B1 3/2012 Kahn et al.
8,140,975 B2 3/2012 Lemay et al.
8,176,411 B2 5/2012 Palmieri
8,224,391 B2 7/2012 Kim et al.
8,237,664 B2 * 8/2012 Swanbufg et al. 345/173
8,239,785 B2 8/2012 Hinckley et al.
8,249,664 B1 8/2012 Bauer et al.
8,253,695 B2 8/2012 Ganatra et al.
8,261,213 B2 9/2012 Hinckley et al.
8,271,660 B2 9/2012 Schulzrinne et al.
8,271,907 B2 * 9/2012 Kim et al. 715/863
8,280,962 B2 10/2012 Muniz et al.
8,284,760 B2 10/2012 Wollmershauser et al.
8,291,344 B2 10/2012 Chaudhri
8,296,332 B2 10/2012 Boley et al.
8,300,005 B2 10/2012 Tateuchi et al.
8,301,701 B2 10/2012 Goodman et al.
8,345,601 B2 * 1/2013 Lazaridis H04L 12/581 370/310
8,356,256 B2 1/2013 Olsen
8,359,017 B2 1/2013 Bruchelt
8,359,335 B2 1/2013 Coker et al.
8,392,837 B2 3/2013 Li
8,402,384 B2 3/2013 Scott
8,453,057 B2 5/2013 Stallings et al.
8,473,843 B2 6/2013 Lundy et al.
8,473,870 B2 6/2013 Hinckley et al.
8,479,122 B2 7/2013 Hotelling et al.
8,510,668 B1 8/2013 Raskin
8,510,677 B2 8/2013 van Os
8,539,384 B2 9/2013 Hinckley et al.
8,572,486 B2 * 10/2013 Yach G06Q 10/107 455/566
8,582,037 B2 11/2013 Stern
8,627,222 B2 1/2014 Hartwell
8,650,501 B2 2/2014 Arnold et al.
8,681,112 B2 3/2014 Singhal
8,687,023 B2 4/2014 Markiewicz et al.
8,689,146 B2 4/2014 Lazaridis et al.
8,711,416 B1 4/2014 Byer et al.
8,726,198 B2 5/2014 Rydenhag et al.
8,745,141 B2 6/2014 Rosenberg et al.
8,875,051 B2 10/2014 Costenaro
8,902,184 B2 12/2014 Rydenhag
9,015,639 B2 4/2015 Yoo
9,015,641 B2 4/2015 Bocking
9,049,261 B2 6/2015 Shiplacoff
9,058,168 B2 6/2015 Rydenhag
9,063,694 B2 6/2015 Sirpal
9,076,147 B2 7/2015 Khoo
9,141,211 B2 9/2015 Feng
9,141,262 B2 9/2015 Nan
9,152,235 B2 10/2015 Wardenaar
9,182,815 B2 11/2015 Small
9,207,860 B2 12/2015 Rydenhag
9,229,231 B2 1/2016 Small
2001/0028365 A1 * 10/2001 Ludolph 345/764
2002/0098831 A1 7/2002 Castell et al.
2002/0126155 A1 * 9/2002 Lin-Hendel 345/785
2003/0070000 A1 4/2003 Coker et al.
2003/0105827 A1 * 6/2003 Tan G06Q 10/107 709/206
2004/0068545 A1 4/2004 Daniell et al.
2004/0117451 A1 * 6/2004 Chung 709/207
2004/0128353 A1 7/2004 Goodman et al.
2004/0128359 A1 7/2004 Horvitz et al.
2004/0179092 A1 * 9/2004 LaPoint H04L 29/06 348/14.08
2004/0196259 A1 * 10/2004 Bradski 345/158
2004/0243677 A1 12/2004 Curbow et al.
2005/0001848 A1 1/2005 Colavin
2005/0041647 A1 * 2/2005 Stinnie H04M 3/42008 370/352
2005/0076110 A1 * 4/2005 Mathew G06Q 10/06 709/223
2005/0108655 A1 * 5/2005 Andrea et al. 715/798
2006/0026521 A1 2/2006 Hotelling et al.
2006/0074869 A1 4/2006 Rosenberg
2006/0075046 A1 4/2006 Yozell-Epstein et al.
2006/0101350 A1 * 5/2006 Scott 715/779
2006/0123360 A1 6/2006 Anwar et al.
2006/0156240 A1 7/2006 Lemay et al.
2006/0190833 A1 * 8/2006 SanGiovanni et al. 715/767
2006/0250377 A1 11/2006 Zadesky et al.
2006/0256082 A1 11/2006 Cho et al.
2006/0270461 A1 * 11/2006 Won H04M 1/72566 455/566
2006/0284852 A1 * 12/2006 Hofmeister et al. 345/173
2007/0011258 A1 1/2007 Khoo
2007/0016958 A1 1/2007 Bodepudi et al.
2007/0038718 A1 * 2/2007 Khoo et al. 709/206
2007/0083600 A1 4/2007 Bakos et al.
2007/0087766 A1 * 4/2007 Hardy H04M 1/2745 455/466
2007/0106939 A1 5/2007 Qassoudi
2007/0139372 A1 * 6/2007 Swanburg et al. 345/156
2007/0150842 A1 6/2007 Chaudhri et al.
2007/0152977 A1 7/2007 Ng et al.
2007/0220444 A1 9/2007 Sunday et al.
2007/0236468 A1 10/2007 Tuli
2007/0256035 A1 11/2007 Matsuzawa et al.
2007/0271376 A1 * 11/2007 Yach G06Q 10/107 709/224
2008/0005247 A9 1/2008 Khoo
2008/0008163 A1 1/2008 Castell et al.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2008/0034047 A1 2/2008 Rosenberg et al.
2008/0046824 A1* 2/2008 Li et al. 715/739
2008/0065758 A1* 3/2008 Narayanaswami 709/224
2008/0094369 A1* 4/2008 Ganatra et al. 345/173
2008/0165151 A1 7/2008 Lemay et al.
2008/0165160 A1 7/2008 Kocienda
2008/0174570 A1 7/2008 Jobs et al.
2008/0189622 A1 8/2008 Sanchez et al.
2008/0220747 A1* 9/2008 Ashkenazi et al. 455/414.1
2008/0231601 A1 9/2008 Fyke et al.
2008/0261569 A1 10/2008 Britt et al.
2008/0272927 A1 11/2008 Woolley et al.
2008/0273014 A1 11/2008 Lowles et al.
2008/0273017 A1 11/2008 Woolley et al.
2009/0006991 A1 1/2009 Lindberg et al.
2009/0007017 A1 1/2009 Anzures et al.
2009/0013282 A1* 1/2009 Mercer 715/788
2009/0049407 A1 2/2009 Casto
2009/0064055 A1* 3/2009 Chaudhri et al. 715/863
2009/0094562 A1 4/2009 Jeong et al.
2009/0119678 A1 5/2009 Shih et al.
2009/0144661 A1 6/2009 Nakajima et al.
2009/0174679 A1 7/2009 Westerman
2009/0177754 A1 7/2009 Brezina et al.
2009/0178006 A1 7/2009 Lemay et al.
2009/0195518 A1 8/2009 Mattice et al.
2009/0199130 A1 8/2009 Tsern et al.
2009/0228807 A1* 9/2009 Lemay G06Q 10/107 715/752
2009/0237367 A1 9/2009 Ryu et al.
2009/0241072 A1* 9/2009 Chaudhri et al. 715/863
2009/0249247 A1* 10/2009 Tseng H04M 1/72552 715/808
2009/0252312 A1* 10/2009 Muniz et al. 379/112.01
2009/0267909 A1 10/2009 Chen et al.
2009/0273583 A1 11/2009 Norhammar
2009/0278806 A1 11/2009 Duarte et al.
2009/0292690 A1* 11/2009 Culbert 707/5
2009/0295753 A1 12/2009 King et al.
2009/0307631 A1* 12/2009 Kim et al. 715/830
2009/0307710 A1 12/2009 Zarzychi et al.
2009/0320047 A1* 12/2009 Khan et al. 719/318
2010/0011304 A1 1/2010 Van Os
2010/0013782 A1 1/2010 Liu et al.
2010/0017695 A1 1/2010 Palmieri
2010/0042954 A1 2/2010 Rosenblatt et al.
2010/0050076 A1 2/2010 Roth
2010/0058226 A1* 3/2010 Flake et al. 715/786
2010/0060586 A1 3/2010 Pisula et al.
2010/0066698 A1 3/2010 Seo
2010/0079392 A1 4/2010 Chiang et al.
2010/0095224 A1 4/2010 Yozell-Epstein et al.
2010/0095239 A1 4/2010 McCommons et al.
2010/0095240 A1 4/2010 Shiplacoff
2010/0107067 A1 4/2010 Vaisanen et al.
2010/0153951 A1 6/2010 Jones
2010/0156656 A1 6/2010 Duarte et al.
2010/0162180 A1* 6/2010 Dunnam G06F 3/04883 715/863
2010/0169417 A1* 7/2010 Rukman H04L 12/589 709/203
2010/0169722 A1 7/2010 Wu et al.
2010/0171753 A1 7/2010 Kwon
2010/0175018 A1 7/2010 Petschnig et al.
2010/0182248 A1 7/2010 Chun
2010/0185989 A1 7/2010 Shiplacoff et al.
2010/0214234 A1 8/2010 Singhal
2010/0214237 A1 8/2010 Echeverri et al.
2010/0218130 A1 8/2010 Conrad et al.
2010/0231533 A1 9/2010 Chaudhri
2010/0235794 A1 9/2010 Ording
2010/0248689 A1 9/2010 Teng et al.
2010/0251178 A1 9/2010 Lee et al.
2010/0257490 A1 10/2010 Lyon et al.
2010/0289760 A1 11/2010 Jonoshita et al.
2010/0295772 A1 11/2010 Alameh et al.
2010/0302172 A1 12/2010 Wilairat
2010/0306693 A1 12/2010 Brinda
2010/0306705 A1 12/2010 Nilsson
2010/0309147 A1 12/2010 Fleizach
2010/0317408 A1 12/2010 Ferren et al.
2011/0016417 A1 1/2011 Shiplacoff
2011/0029927 A1 2/2011 Lietzke et al.
2011/0034208 A1 2/2011 Gu et al.
2011/0061021 A1* 3/2011 Kang G06F 3/0481 715/800
2011/0070924 A1* 3/2011 Kim 455/566
2011/0083111 A1 4/2011 Forutanpour et al.
2011/0086613 A1* 4/2011 Doudkine G06Q 10/107 455/410
2011/0099490 A1 4/2011 Barraclough et al.
2011/0112771 A1 5/2011 French
2011/0163944 A1 7/2011 Bilbrey et al.
2011/0163970 A1 7/2011 Lemay
2011/0163989 A1 7/2011 Singhal
2011/0167369 A1 7/2011 van Os
2011/0173437 A1 7/2011 Basir
2011/0175748 A1 7/2011 Small et al.
2011/0175839 A1 7/2011 Prabhu
2011/0181526 A1 7/2011 Shaffer et al.
2011/0185318 A1 7/2011 Hinckley et al.
2011/0209088 A1 8/2011 Hinckley et al.
2011/0209097 A1 8/2011 Hinckley et al.
2011/0209104 A1 8/2011 Hinckley et al.
2011/0210983 A1 9/2011 Theimer et al.
2011/0231499 A1* 9/2011 Stovicek H04M 1/72547 709/206
2011/0252369 A1 10/2011 Chaudhri
2011/0252381 A1* 10/2011 Chaudhri 715/838
2011/0256848 A1 10/2011 Bok et al.
2011/0264689 A1* 10/2011 Hirst G06F 17/30663 707/769
2011/0293079 A1* 12/2011 Khouri H04M 3/53383 379/88.23
2011/0294467 A1 12/2011 Kim et al.
2012/0013552 A1 1/2012 Ahn
2012/0026194 A1 2/2012 Wagner et al.
2012/0032979 A1 2/2012 Blow et al.
2012/0081303 A1 4/2012 Cassar et al.
2012/0083260 A1 4/2012 Arriola et al.
2012/0084697 A1 4/2012 Reeves
2012/0084698 A1 4/2012 Sirpal et al.
2012/0084739 A1 4/2012 Sirpal et al.
2012/0090004 A1* 4/2012 Jeong 725/39
2012/0102437 A1 4/2012 Worley et al.
2012/0105358 A1 5/2012 Momeyer et al.
2012/0110087 A1 5/2012 Culver et al.
2012/0115449 A1 5/2012 Bruchelt
2012/0154303 A1 6/2012 Lazaridis et al.
2012/0159380 A1 6/2012 Kocienda et al.
2012/0173993 A1 7/2012 Chakra et al.
2012/0180001 A1 7/2012 Griffin et al.
2012/0192108 A1 7/2012 Kolb
2012/0206392 A1 8/2012 Ng et al.
2012/0210214 A1 8/2012 Yoo et al.
2012/0218192 A1 8/2012 Lazaridis et al.
2012/0226978 A1 9/2012 Harberts et al.
2012/0231770 A1* 9/2012 Clarke H04L 12/5885 455/414.1
2012/0235930 A1 9/2012 Lazaridis et al.
2012/0236037 A1 9/2012 Lessing et al.
2012/0266082 A1 10/2012 Webber
2012/0280917 A1 11/2012 Toksvig et al.
2012/0284673 A1 11/2012 Lamb et al.
2012/0290946 A1 11/2012 Schrock et al.
2012/0293418 A1 11/2012 Garside et al.
2012/0304107 A1 11/2012 Nan et al.
2012/0304108 A1 11/2012 Jarrett
2012/0311444 A1 12/2012 Chaudhri
2012/0326984 A1 12/2012 Ghassabian
2012/0327009 A1 12/2012 Fleizach
2013/0002524 A1 1/2013 Sirpal et al.
2013/0007665 A1 1/2013 Chaudhri et al.
2013/0024820 A1 1/2013 Kirkpatrick

(56) **References Cited**

U.S. PATENT DOCUMENTS

2013/0031515	A1	1/2013	Funabashi et al.	
2013/0033477	A1	2/2013	Sirpal et al.	
2013/0055170	A1	2/2013	Langlois et al.	
2013/0063383	A1	3/2013	Anderssonreimer et al.	
2013/0083260	A1	4/2013	Minami	
2013/0117689	A1	5/2013	Lessing et al.	
2013/0117718	A1	5/2013	Lazaridis et al.	
2013/0141371	A1	6/2013	Hallford et al.	
2013/0145295	A1	6/2013	Bocking et al.	
2013/0159941	A1	6/2013	Langlois et al.	
2013/0167066	A1	6/2013	Scott	
2013/0185650	A1	7/2013	Gutowitz	
2013/0187863	A1	7/2013	Rydenhag et al.	
2013/0187869	A1	7/2013	Rydenhag et al.	
2013/0191791	A1	7/2013	Rydenhag et al.	
2013/0321340	A1	12/2013	Seo et al.	
2013/0326401	A1	12/2013	van Os	
2013/0326583	A1	12/2013	Freihold et al.	
2013/0332886	A1	12/2013	Cranfill et al.	
2013/0346906	A1	12/2013	Farago	
2014/0011485	A1	1/2014	Forstall et al.	
2014/0068494	A1	3/2014	Petersen et al.	
2014/0109020	A1*	4/2014	Wielgosz	715/863
2014/0111440	A1	4/2014	Garside et al.	
2014/0258897	A1	9/2014	Shiplacoff	

FOREIGN PATENT DOCUMENTS

EP	2015176	A1	1/2009
EP	2045700	A1	4/2009
EP	2068236	A1	6/2009
EP	2109030	A2	10/2009
EP	2383636	A1	11/2011
EP	2458493	A3	5/2012
EP	2485138	A1	8/2012
KR	10-2008-0041809	A1	5/2008
KR	20080041809		5/2008
KR	10-2009-0036578	A	4/2009
KR	20090036578		4/2009
KR	10-2010-0032660	A	3/2010
KR	20100023637		3/2010
KR	20100032660		3/2010
TW	201118666		6/2011
WO	2004051451	A3	6/2004
WO	2009097555	A2	8/2009
WO	2009120925	A2	10/2009
WO	2009143076		11/2009
WO	2010040670	A1	4/2010
WO	2012097385	A2	7/2012
WO	2012128795	A1	9/2012

OTHER PUBLICATIONS

International Search Report and Written Opinion issued Jul. 30, 2013, on related application PCT/IB2013/000457, 14 pages.

http://www.evernote.com/peek/ Retrieved Aug. 27, 2012, 2 pages.

Microsoft, "Cross Sliding State enumeration", internet article, http://www.msdn.microsoft.com/en-us/library/windows/apps/windows.ui.input.crosslidingstate , Retrieved Sep. 4, 2012, 2 pages.

Levesque, et al., Frictional Widgets: Enhancing Touch Interfaces with Programmable Friction, published CHI 2011, ACM 978-1-4503-0268-5/11/05, May 7-12, 2011, 6 pages.

http://www.jimblackler.net/blog/?p=67/ "QuickCalendar, an application for Android written in Java" Retrieved Oct. 18, 2012, 6 pages.

Google, Android 2.3 User's Guide, AUG-2.3-103-KO Android™ mobile technology platform 2.3, Dec. 13, 2010, 368 pages. (Korean Language Version).

International Bureau, International Preliminary Report on Patentability and Written Opinion issued in connection with International Application No. PCT/IB2013/000457, mailed Sep. 4, 2014, 10 pages.

Extended European Search Report in European Application No. 12734622.9, dated May 4, 2015, 9 pages.

Evernote Corporation, http://www.evernote.com/peek/, Retrieved Aug. 27, 2012, 5 pages.

Jim Blackler, QuickCalendar, an application for Android written in Java, http://jimblackler.net/blog/?p=67 [Oct. 18, 2012 6:00:33 PM], Jan. 30, 2009, 6 pages.

Apple, iOS: Understanding Notifications, http://support.apple.com/kb/HT3576[Oct. 18, 2012 6:05:38 PM], last modified Sep. 19, 2012, 3 pages.

Google, Android 2.3 User's Guide, AUG-2.3-103 Android™ mobile technology platform 2.3, Dec. 13, 2010, 380 pages. (English Language Version).

User Guide Samsung Epic 4G, A Galaxy S Phone, Sprint Oct. 8, 2010, pp. 268.

http://www.gigaom.com/2011/10/12/ios-5-notifications-and-notification-center/, Retrieved May 2, 2013, Asch, Josh, "iOS 5: Notifications and Notification Center", Tech News and Analysis, Oct. 12, 2011, four pages.

Microsoft, "Cross Sliding State enumeration", internet article, http://msdn.microsoft.com.en-us/library/windows/apps/windows.ui.inout.crosslidingstate, retrieved Sep. 4, 2012, 3 pages.

Levesque et al., Frictional Widgets: Enhancing Touch Interfaces with Programmable Friction, published CHI 2011, ACM 978-1-4503-0268-5/11/05, May 7-12, 2011, 6 pages.

"Android Push Email Setup"; Feb. 14, 2011. Retrived from the internet: https://www.youtube.com/watch?v=16iqCSPnQYU.

International Preliminary Report on Patentability in International Application No. PCT/US2013/020653, dated May 7, 2015, 8 pages.

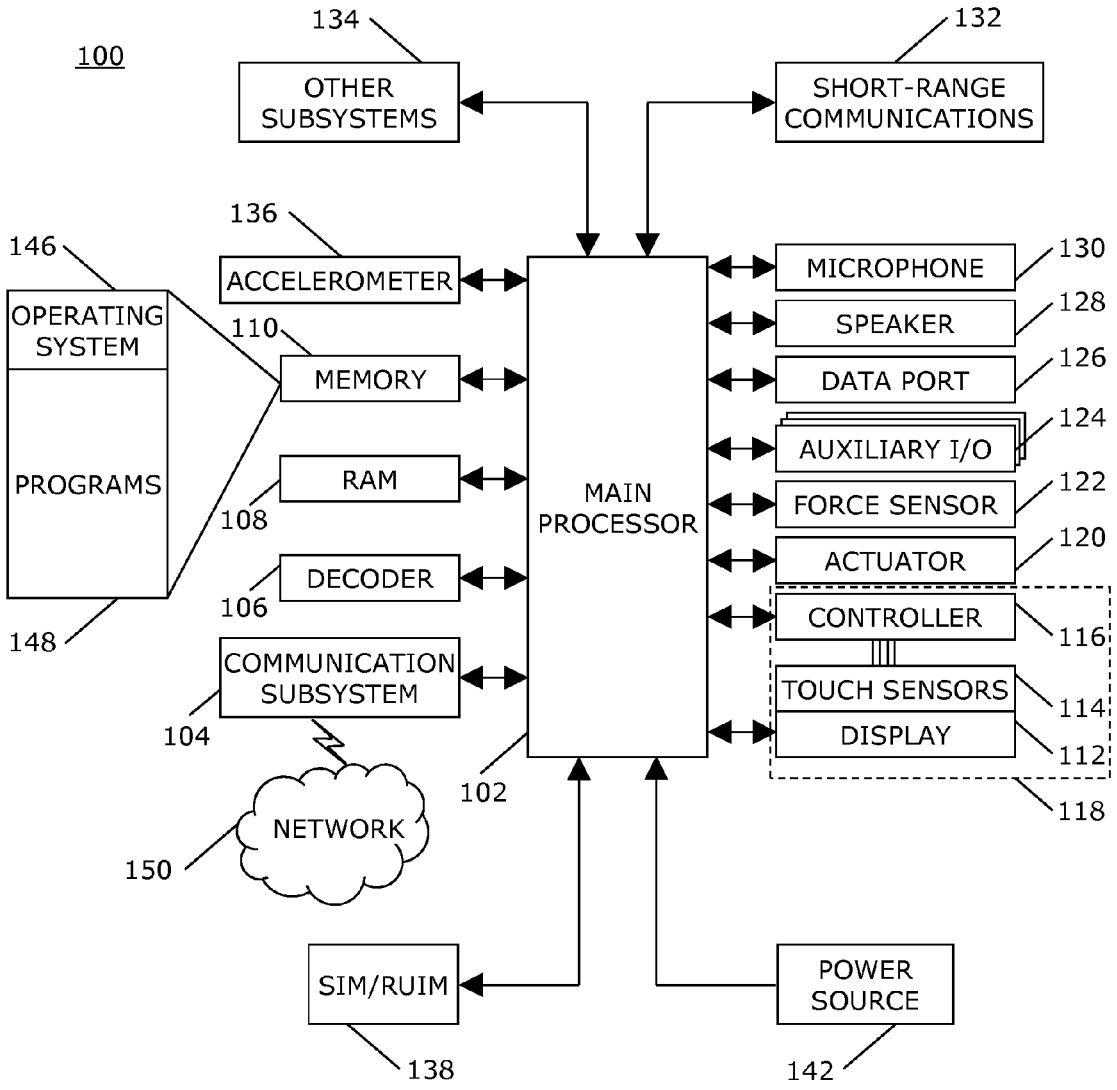
International Search Report and Written Opinion in International Application PCT/US2013/020653, dated Jun. 14, 2013, 10 pages.

Office Action issued in related Chinese Application No. 201280005363.3 on Mar. 3, 2016.

Office Action issued in Chinese Application No. 2012800053633 on Aug. 16, 2016.

Office Action issued in Canadian Application No. 2,823,659 on Aug. 18, 2016.

* cited by examiner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POWER SOURCE
142

FIG. 1

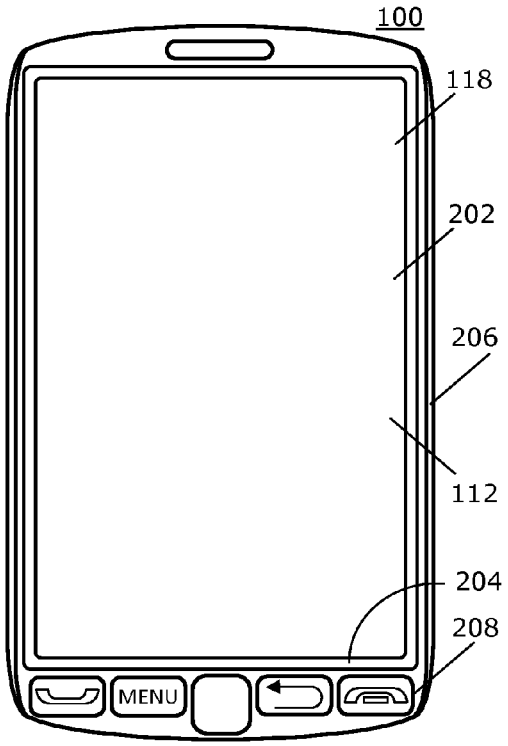


FIG. 2

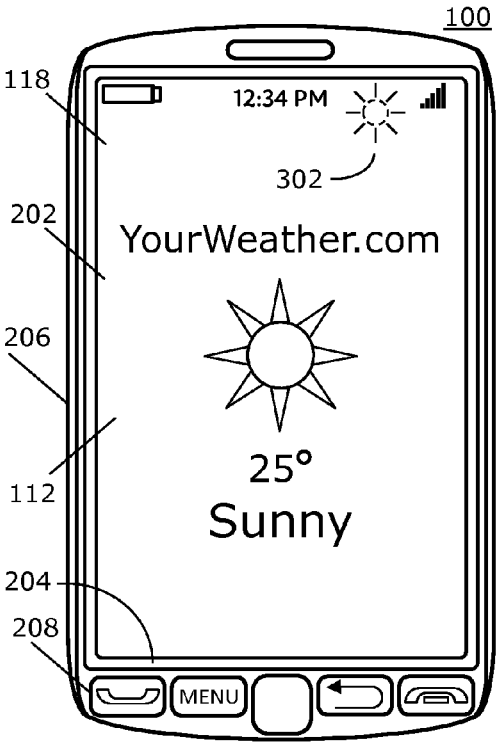


FIG. 3

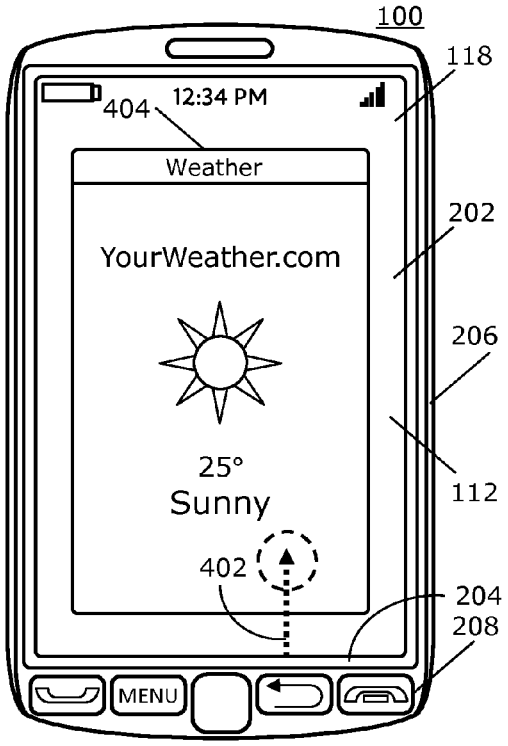


FIG. 4

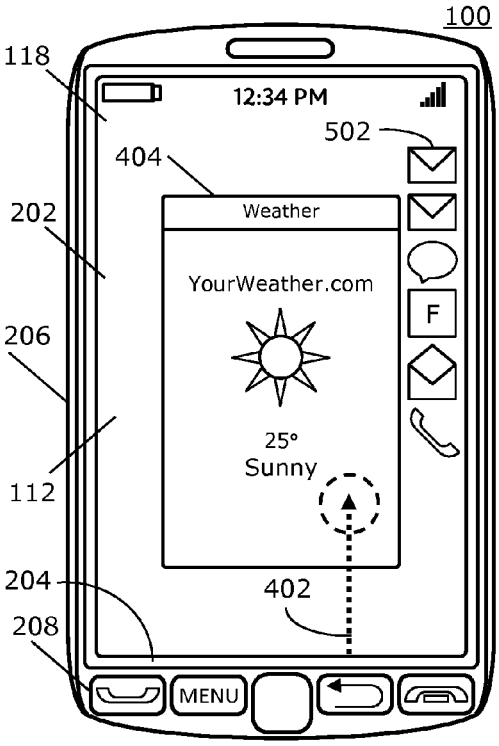


FIG. 5

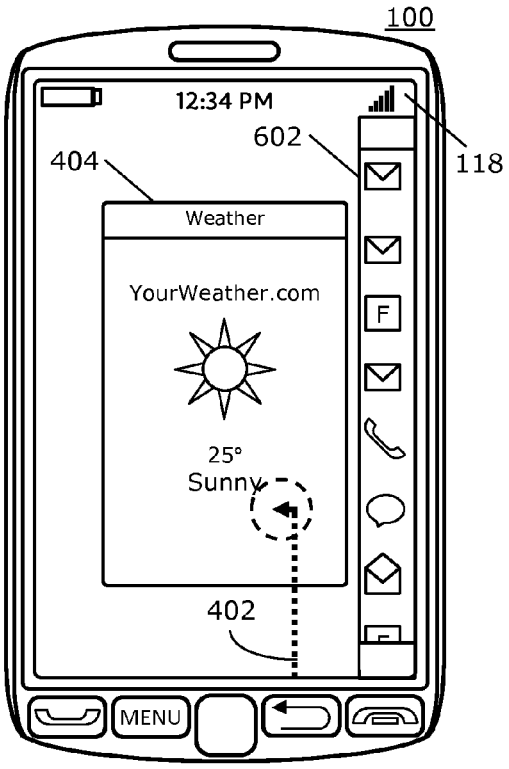


FIG. 6

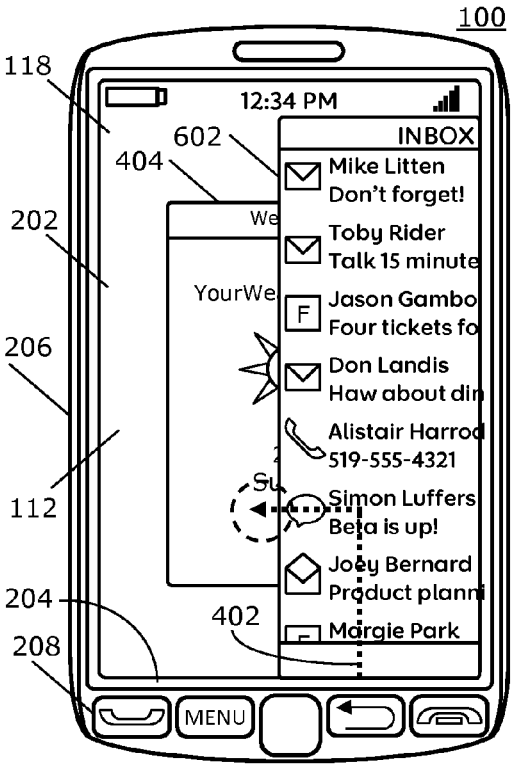


FIG. 7

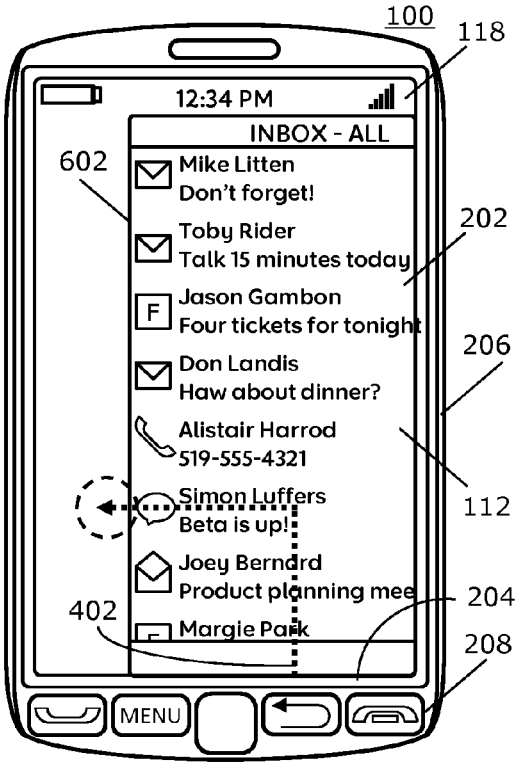


FIG. 8

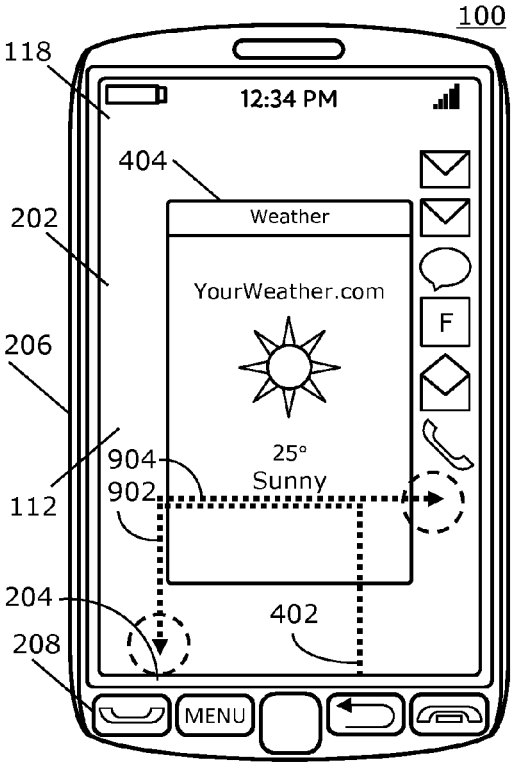


FIG. 9

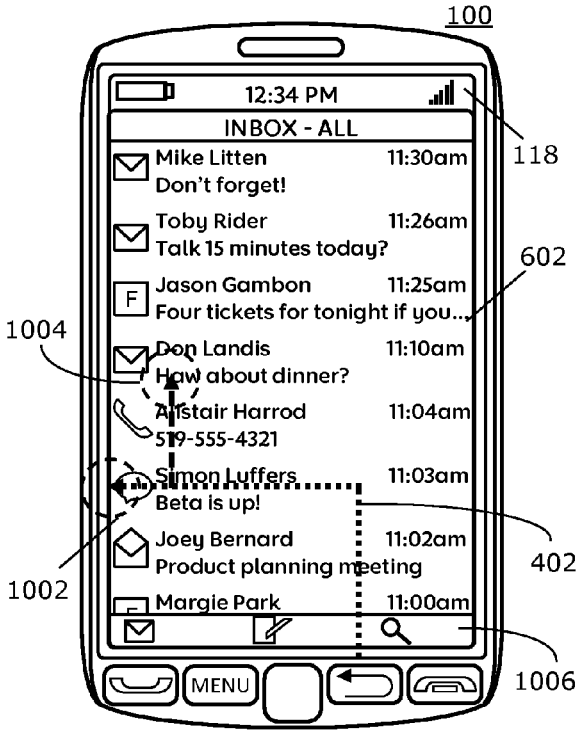


FIG. 10

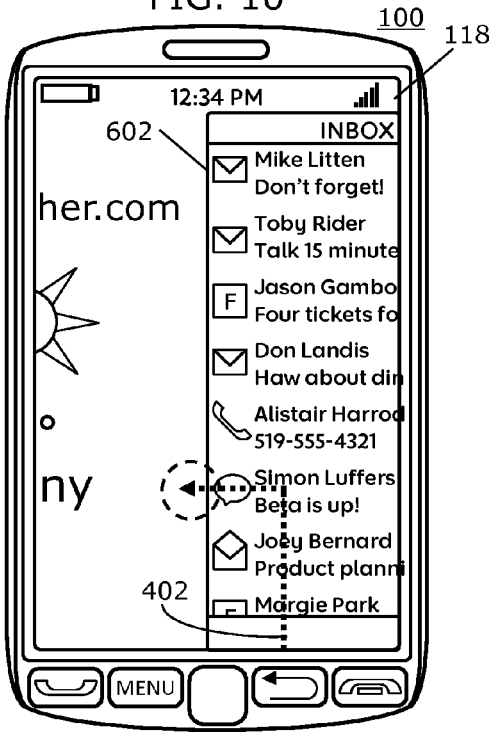


FIG. 11

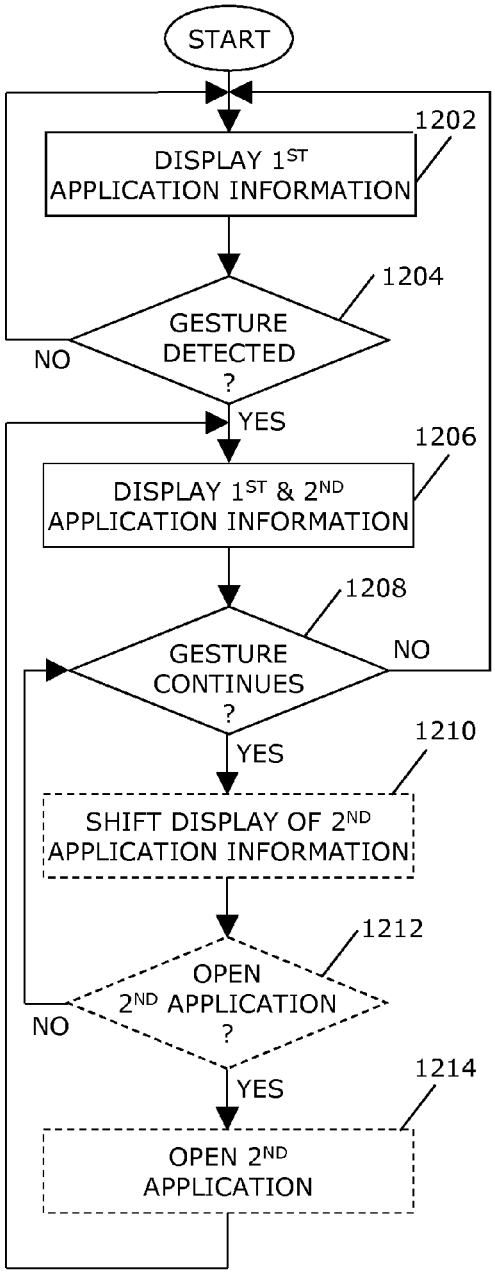


FIG. 12

FIG. 13

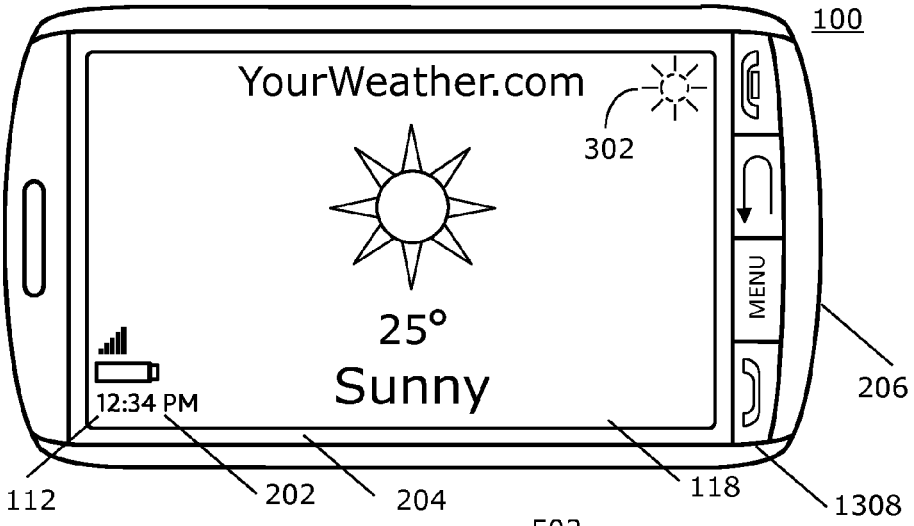


FIG. 14

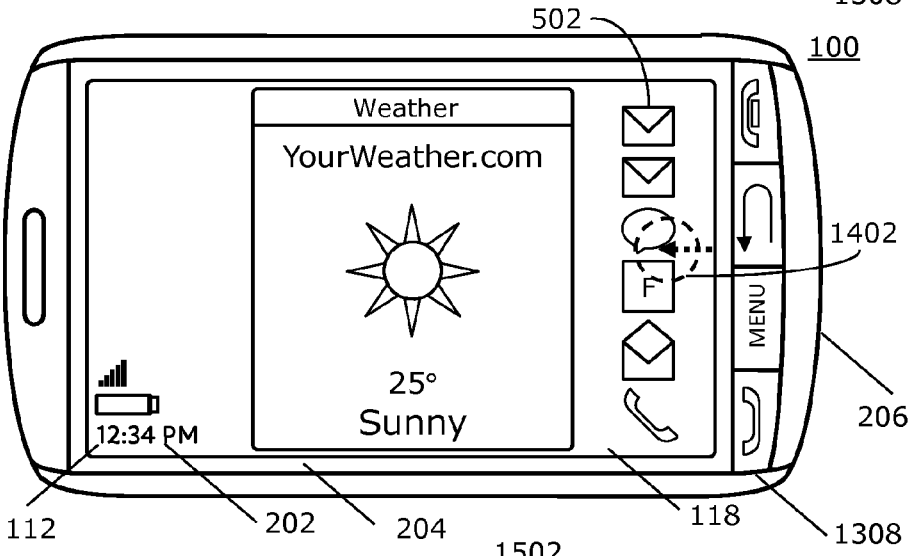


FIG. 15

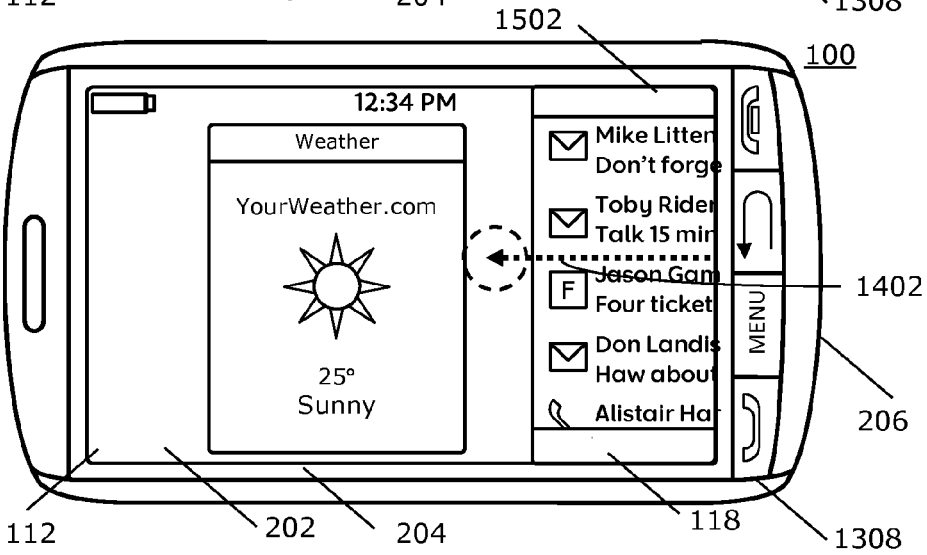


FIG. 16

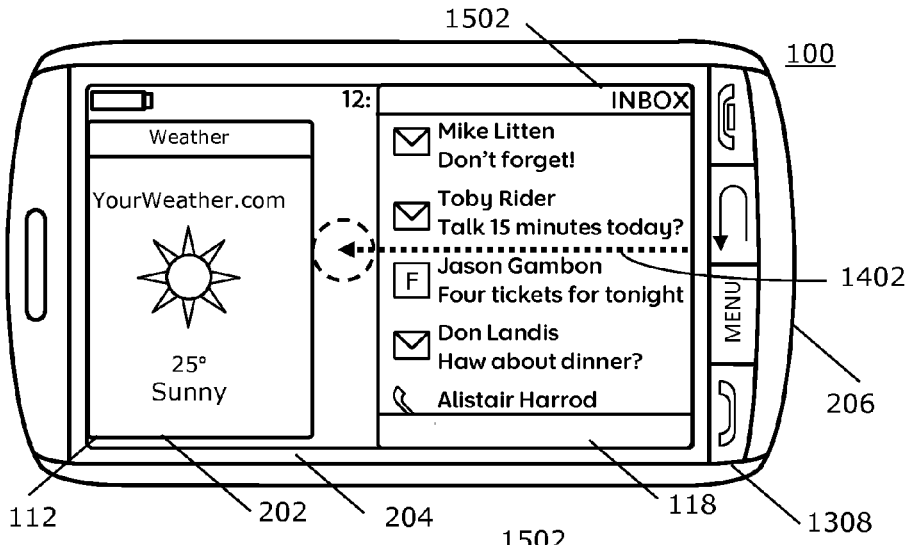


FIG. 17

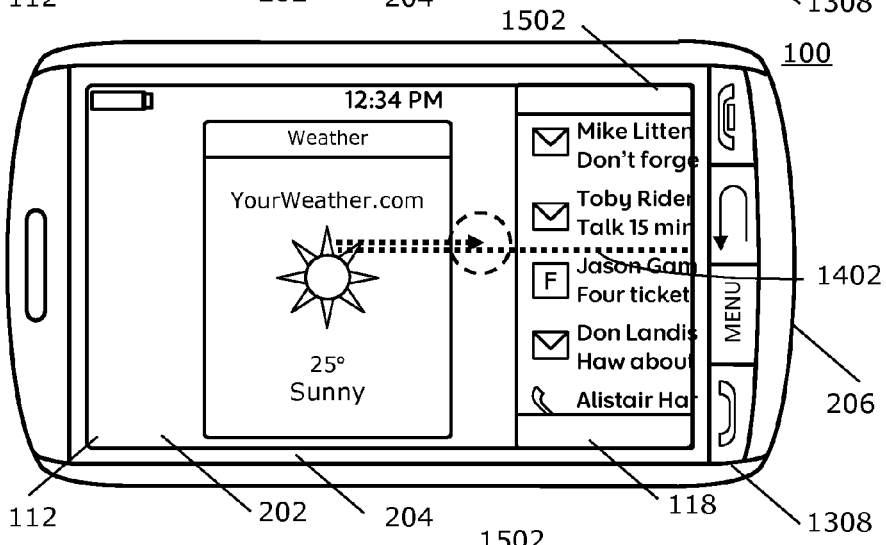


FIG. 18

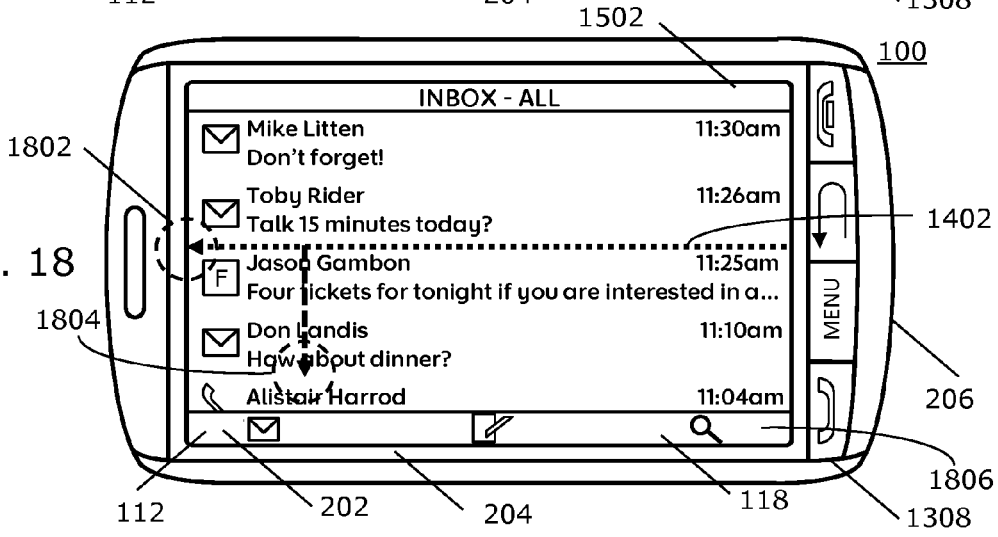


FIG. 19

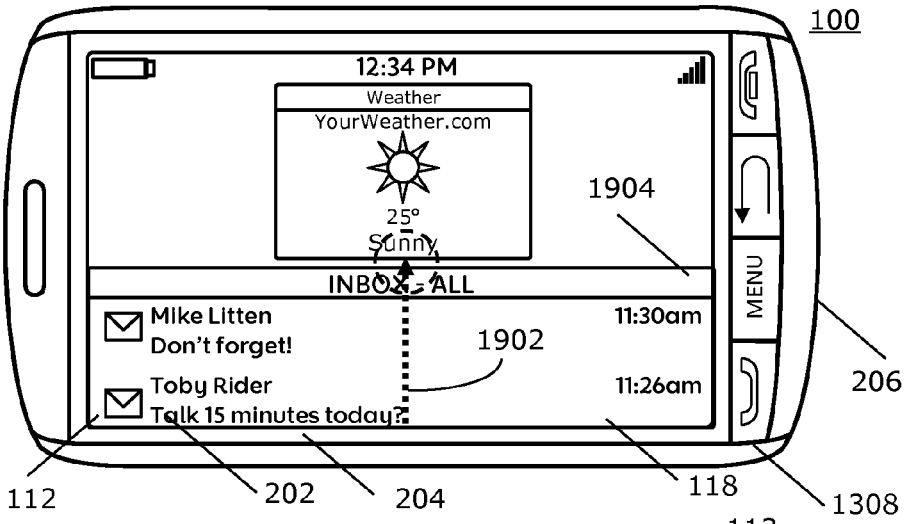


FIG. 20

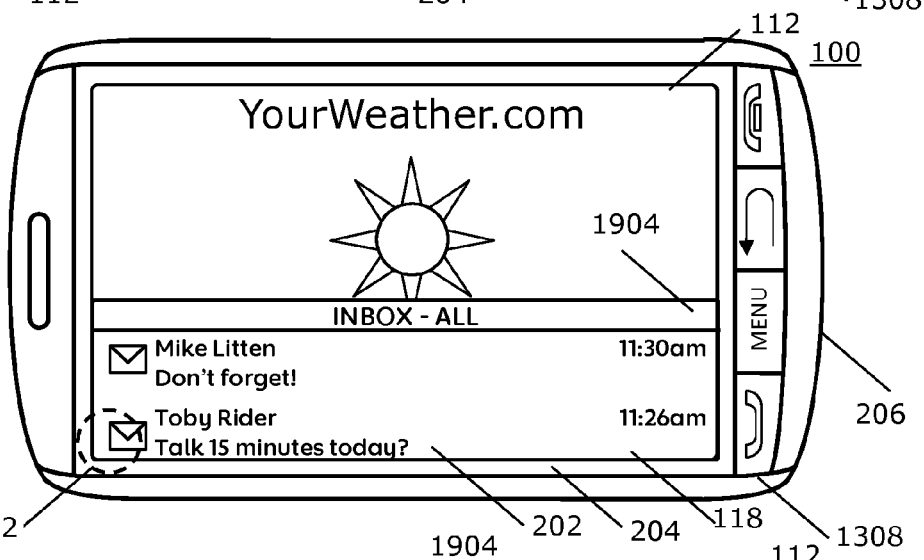
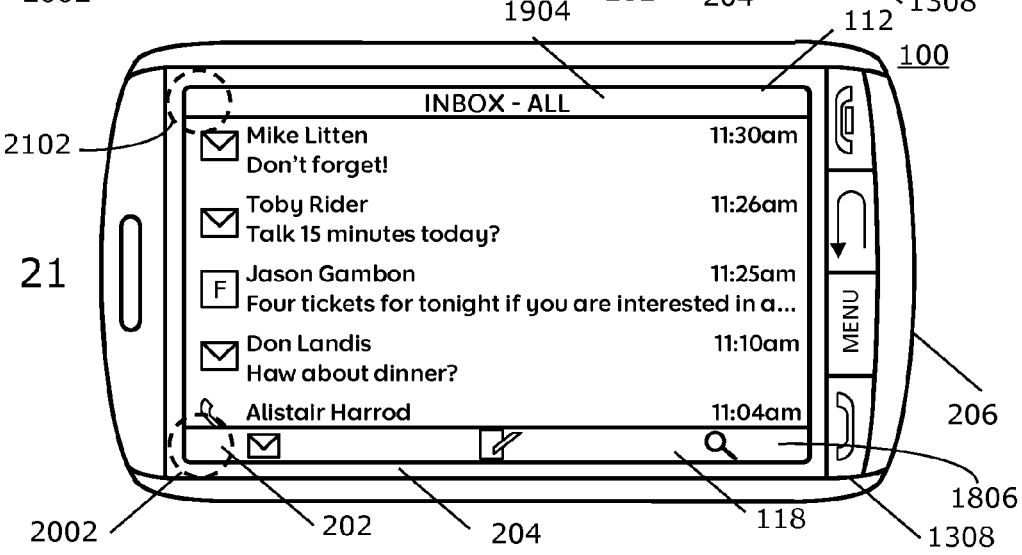


FIG. 21



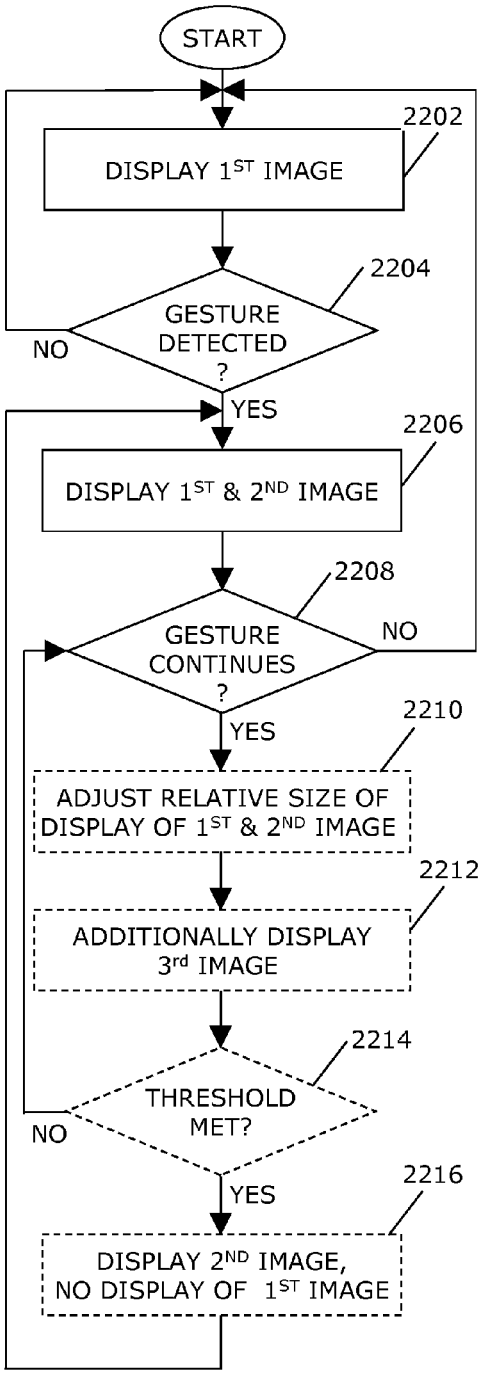


FIG. 22

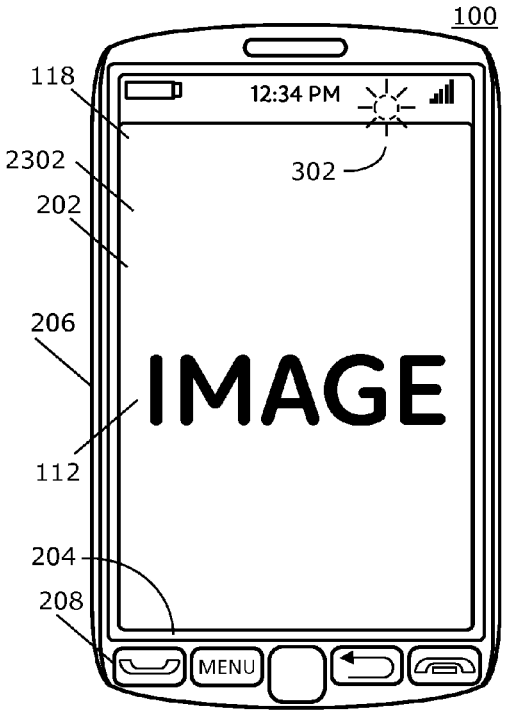


FIG. 23

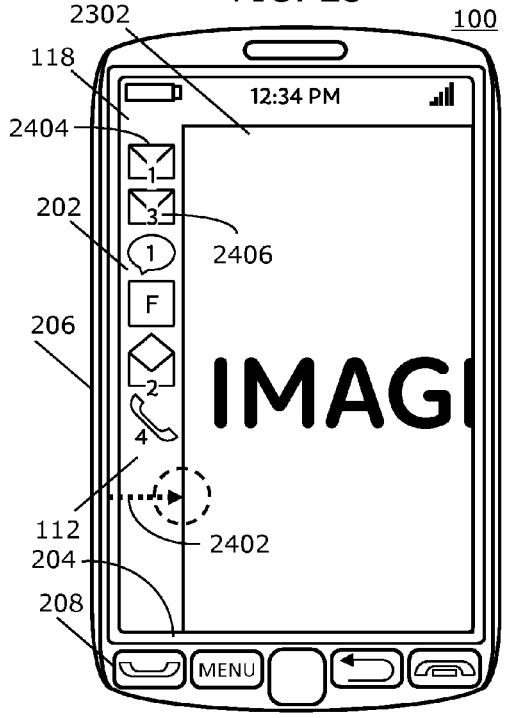


FIG. 24

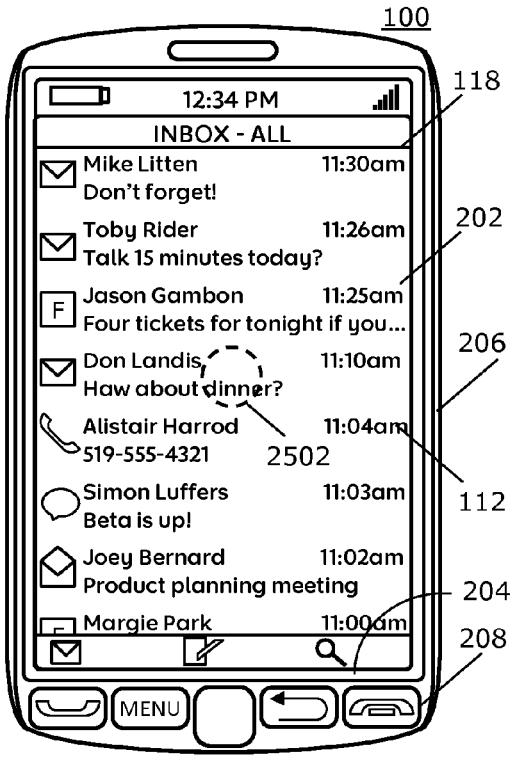


FIG. 25

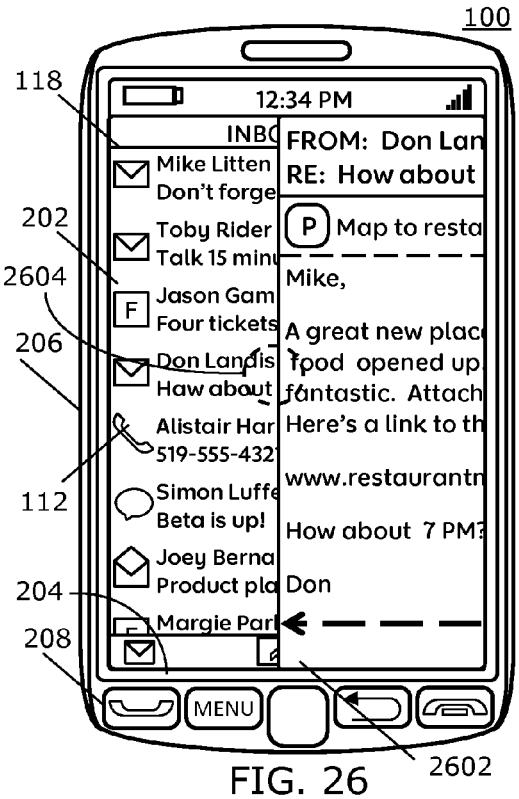


FIG. 26

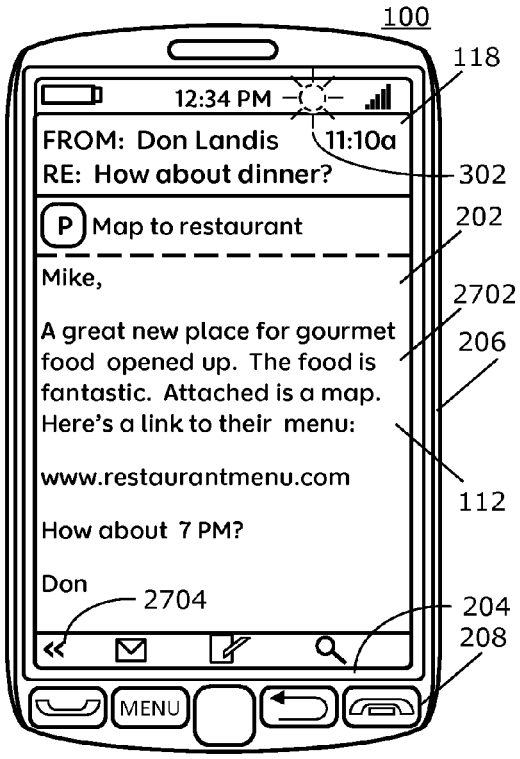


FIG. 27

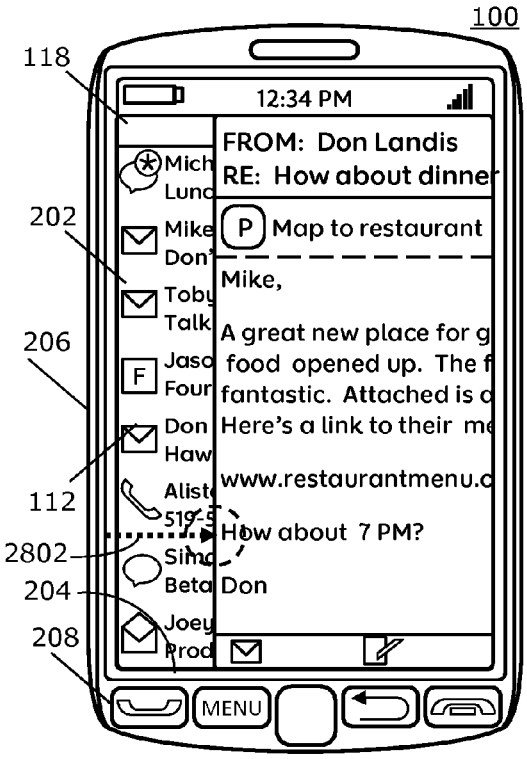


FIG. 28

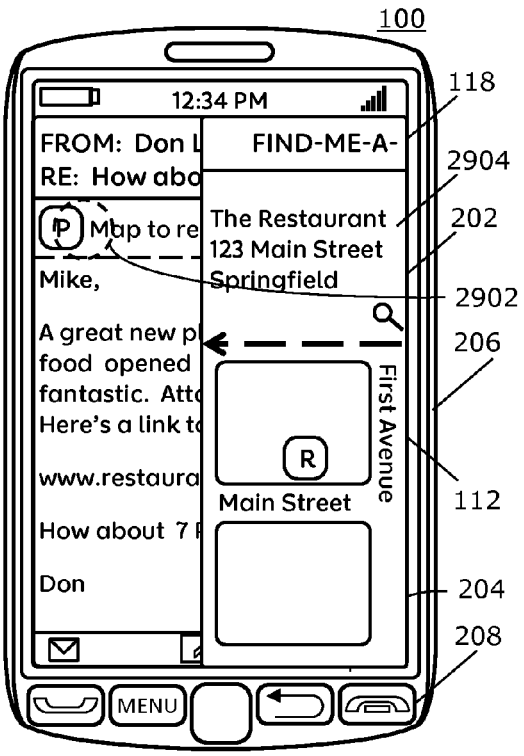


FIG. 29

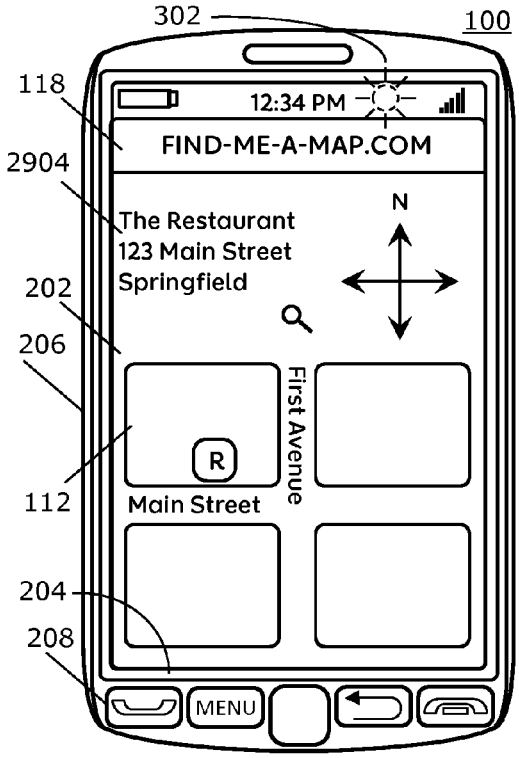


FIG. 30

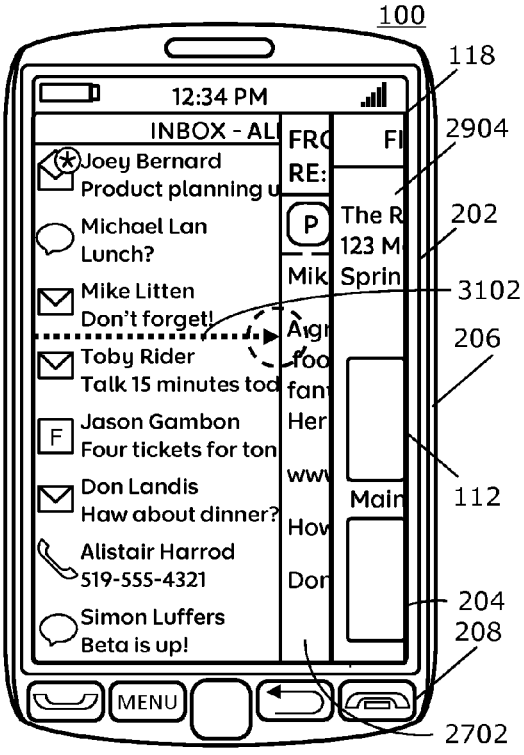


FIG. 31

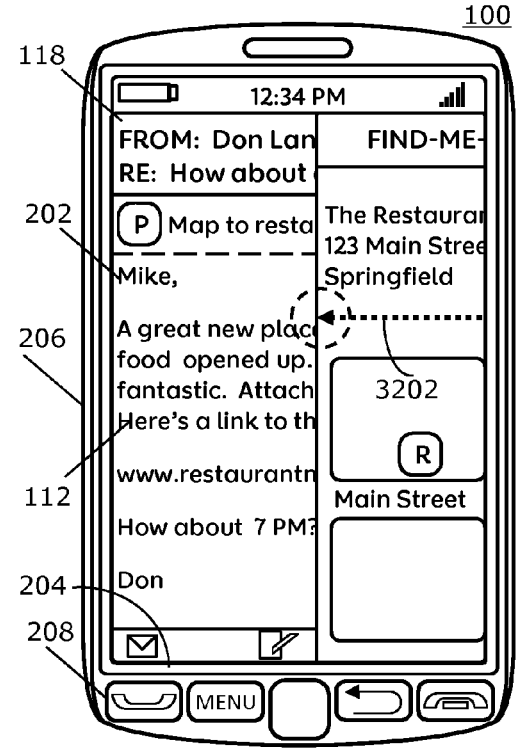


FIG. 32

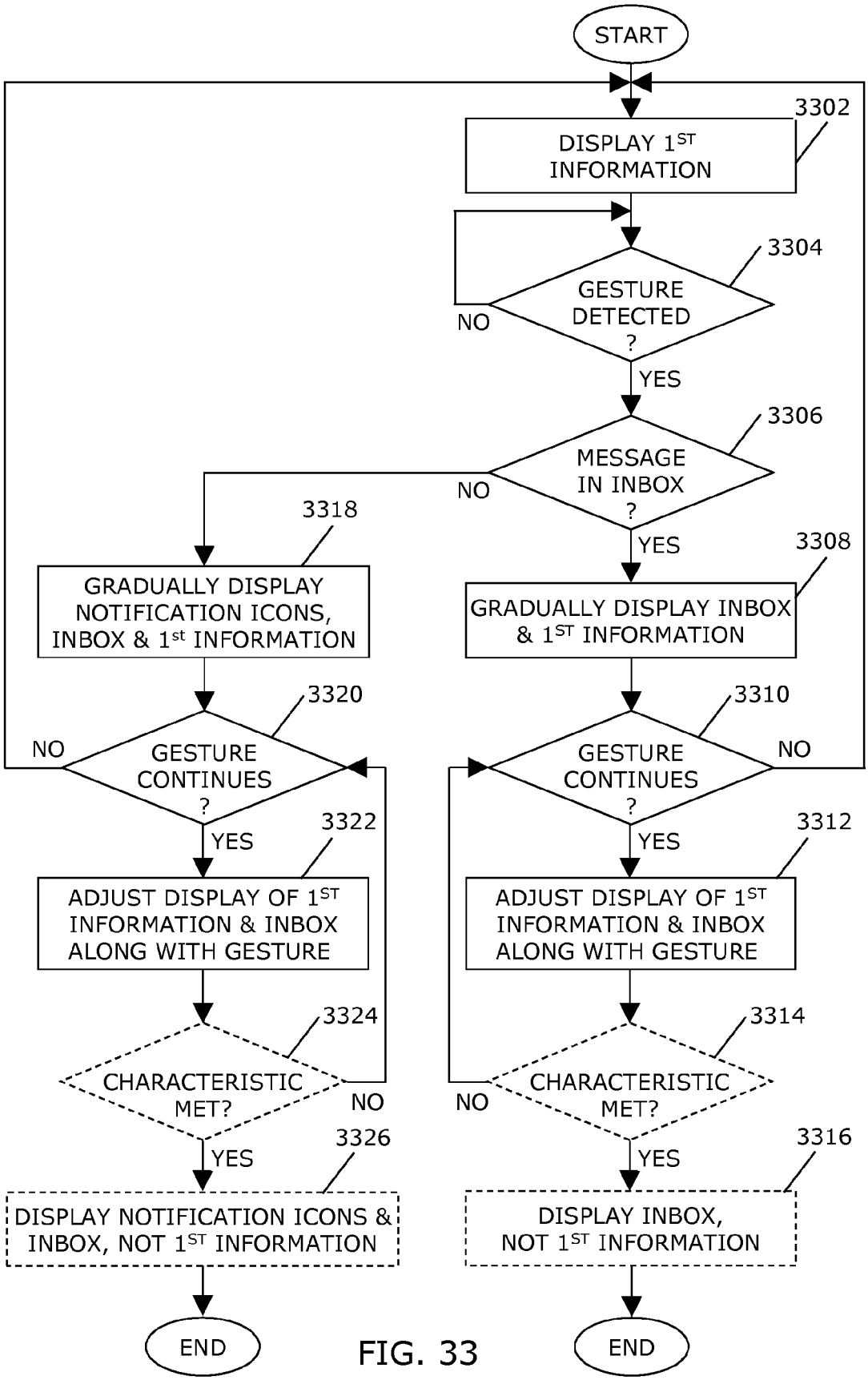

START
3302
DISPLAY 1ST INFORMATION
3304
GESTURE DETECTED ?
NO
YES
3306
MESSAGE IN INBOX ?
NO
YES
3318
GRADUALLY DISPLAY NOTIFICATION ICONS, INBOX & 1st INFORMATION
3308
GRADUALLY DISPLAY INBOX & 1ST INFORMATION
3320
GESTURE CONTINUES ?
NO
YES
3310
GESTURE CONTINUES ?
NO
YES
3322
ADJUST DISPLAY OF 1ST INFORMATION & INBOX ALONG WITH GESTURE
3312
ADJUST DISPLAY OF 1ST INFORMATION & INBOX ALONG WITH GESTURE
3324
CHARACTERISTIC MET?
NO
YES
3314
CHARACTERISTIC MET?
NO
YES
3326
DISPLAY NOTIFICATION ICONS & INBOX, NOT 1ST INFORMATION
3316
DISPLAY INBOX, NOT 1ST INFORMATION
END
END

FIG. 33

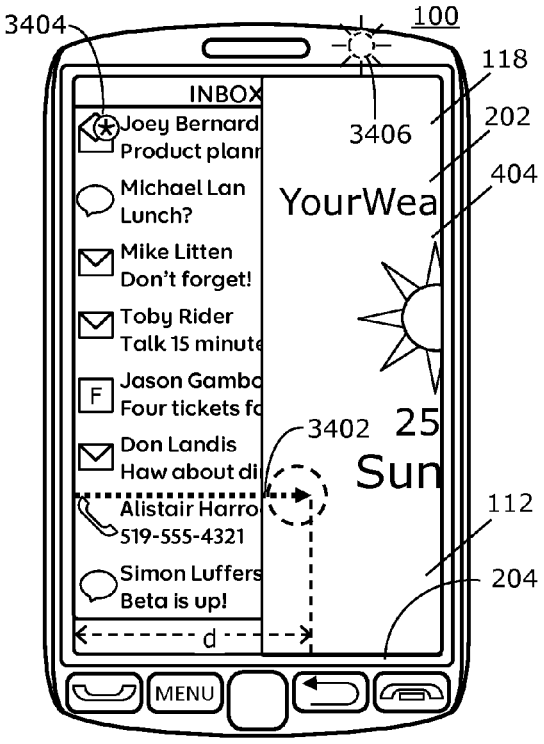


FIG. 34

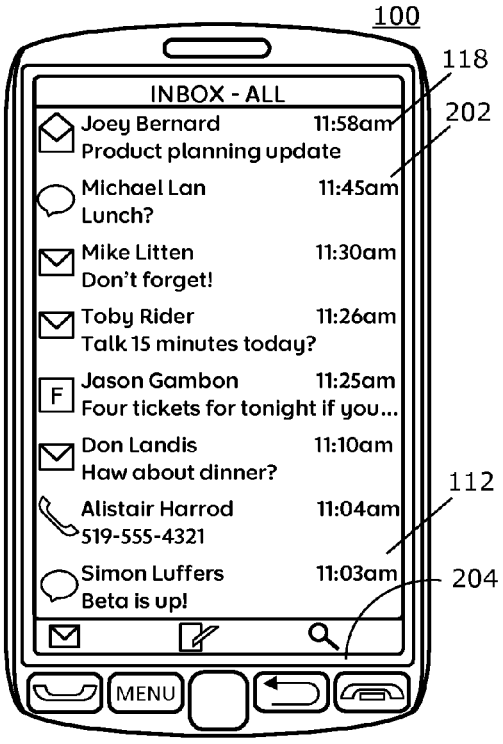


FIG. 35

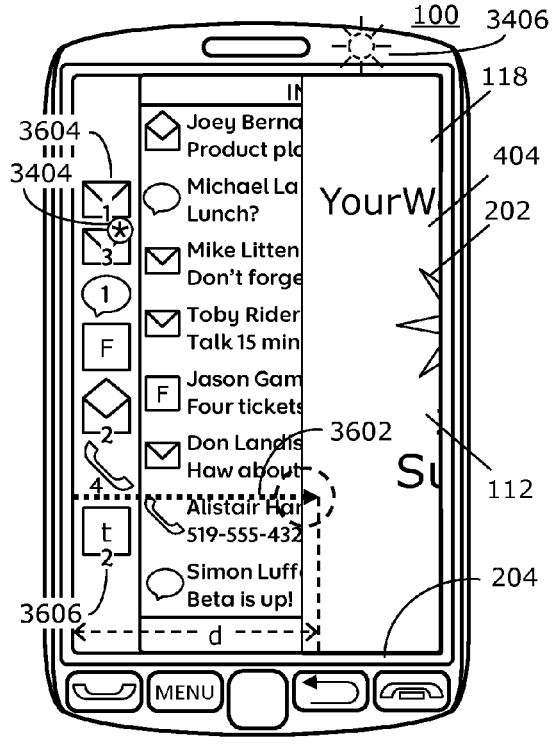


FIG. 36

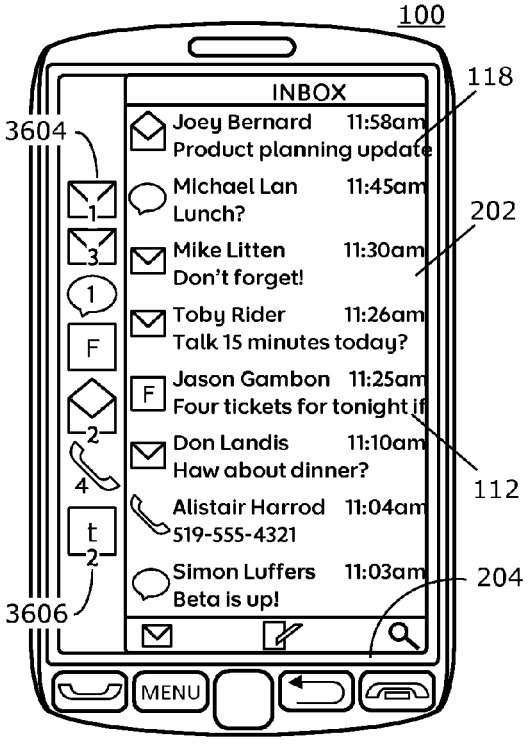


FIG. 37

ELECTRONIC DEVICE AND METHOD OF DISPLAYING INFORMATION IN RESPONSE TO A GESTURE

CROSS REFERENCE TO RELATED APPLICATIONS

This patent application is a continuation-in-part of and claims priority to U.S. patent application Ser. No. 13/309,227, filed on Dec. 1, 2011, titled "ELECTRONIC DEVICE AND METHOD OF DISPLAYING INFORMATION IN RESPONSE TO A GESTURE" and is a continuation-in-part of and claims priority to U.S. patent application Ser. No. 13/405,193, filed on Feb. 24, 2012, titled "ELECTRONIC DEVICE AND METHOD OF DISPLAYING INFORMATION IN RESPONSE TO A GESTURE," the contents of which applications are incorporated herein by reference in their entirety. U.S. patent application Ser. No. 13/309,227 is a continuation-in-part of and claims priority to U.S. patent application Ser. No. 13/036,186, filed on Feb. 28, 2011, titled "ELECTRONIC DEVICE AND METHOD OF DISPLAYING INFORMATION IN RESPONSE TO INPUT." U.S. patent application Ser. No. 13/309,227 is a continuation-in-part of and claims priority to U.S. patent application Ser. No. 12/985,600, filed on Jan. 6, 2011, titled "ELECTRONIC DEVICE AND METHOD OF CONTROLLING SAME."

FIELD OF TECHNOLOGY

The present disclosure relates to electronic devices, including but not limited to, portable electronic devices having touch-sensitive displays and their control.

BACKGROUND

Electronic devices, including portable electronic devices, have gained widespread use and may provide a variety of functions including, for example, telephonic, electronic messaging and other personal information manager (PIM) application functions. Portable electronic devices include, for example, several types of mobile stations such as simple cellular telephones, smart phones, wireless personal digital assistants (PDAs), and laptop computers with wireless 802.11 or Bluetooth capabilities.

Portable electronic devices such as PDAs or smart telephones are generally intended for handheld use and ease of portability. Smaller devices are generally desirable for portability. A touch-sensitive display, also known as a touchscreen display, is particularly useful on handheld devices, which are small and have limited space for user input and output. The information displayed on the touch-sensitive displays may be modified based on the functions and operations being performed. With continued demand for decreased size of portable electronic devices, touch-sensitive displays continue to decrease in size.

Improvements in devices with touch-sensitive displays are desirable.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a block diagram of an electronic device such as a portable electronic device in accordance with the disclosure.

FIG. **2** is a front view of a portable electronic device in accordance with the disclosure.

FIG. **3** through FIG. **11** illustrate examples of previewing information on a portable electronic device in accordance with the disclosure.

FIG. **12**, FIG. **22**, and FIG. **33** are flowcharts illustrating a method of controlling display of information in accordance with the disclosure.

FIG. **13** through FIG. **21**, FIG. **23** through FIG. **32**, and FIG. **34** through FIG. **37** illustrate examples of previewing or displaying information on an electronic device in accordance with the disclosure.

DETAILED DESCRIPTION

The following describes an apparatus for and method of controlling display of information for two applications or images. A gesture detected during display of information associated with a first application or image requests display of information associated with a second application or image. The information associated with the second application or image may be previewed without opening or launching the second application. Optionally, the application may be opened. A single continuous gesture may control the amount of the second application or image information that is displayed, as well as optionally opening the second application. When the inbox contains or includes a recently received message, a gesture previews or reveals the inbox. When the gesture ends before the threshold, the inbox is no longer displayed; when the gesture ends after the threshold or otherwise indicates a request to open the inbox, the inbox is opened and the first information is no longer displayed. When the inbox does not contain or include the recently received message, a gesture reveals or displays the inbox and a plurality of visual notification icons. When the gesture ends before a threshold, the inbox and the visual notification icons are no longer displayed; when the gesture ends after the threshold or otherwise indicates a request to open the inbox, the visual notification icons are displayed, the inbox is opened, and the first information is no longer displayed.

For simplicity and clarity of illustration, reference numerals may be repeated among the figures to indicate corresponding or analogous elements. Numerous details are set forth to provide an understanding of the examples described herein. The examples may be practiced without these details. In other instances, well-known methods, procedures, and components are not described in detail to avoid obscuring the examples described. The description is not to be considered as limited to the scope of the examples described herein.

The disclosure generally relates to an electronic device, such as a portable electronic device or non-portable electronic device. Examples of portable electronic devices include mobile, or handheld, wireless communication devices such as pagers, cellular phones, cellular smartphones, wireless organizers, personal digital assistants, wirelessly enabled notebook computers, tablet computers, mobile internet devices, electronic navigation devices, and so forth. The portable electronic device may be a portable electronic device without wireless communication capabilities, such as handheld electronic games, digital photograph albums, digital cameras, media players, e-book readers, and so forth. Examples of non portable electronic devices include desktop computers, electronic white boards, smart boards utilized for collaboration, built-in monitors or displays in furniture or appliances, and so forth.

A block diagram of an example of a portable electronic device **100** is shown in FIG. **1**. The portable electronic device **100** includes multiple components, such as a proces-

sor **102** that controls the overall operation of the portable electronic device **100**. Communication functions, including data and voice communications, are performed through a communication subsystem **104**. Data received by the portable electronic device **100** is decompressed and decrypted by a decoder **106**. The communication subsystem **104** receives messages from and sends messages to a wireless network **150**. The wireless network **150** may be any type of wireless network, including, but not limited to, data wireless networks, voice wireless networks, and networks that support both voice and data communications. A power source **142**, such as one or more rechargeable batteries or a port to an external power supply, powers the portable electronic device **100**.

The processor **102** interacts with other components, such as a Random Access Memory (RAM) **108**, memory **110**, a touch-sensitive display **118**, one or more actuators **120**, one or more force sensors **122**, an auxiliary input/output (I/O) subsystem **124**, a data port **126**, a speaker **128**, a microphone **130**, short-range communications **132** and other device subsystems **134**. The touch-sensitive display **118** includes a display **112** and touch sensors **114** that are coupled to at least one controller **116** that is utilized to interact with the processor **102**. Input via a graphical user interface is provided via the touch-sensitive display **118**. Information, such as text, characters, symbols, images, icons, and other items that may be displayed or rendered on a portable electronic device, is displayed on the touch-sensitive display **118** via the processor **102**. The processor **102** may also interact with an accelerometer **136** that may be utilized to detect direction of gravitational forces or gravity-induced reaction forces.

To identify a subscriber for network access, the portable electronic device **100** may utilize a Subscriber Identity Module or a Removable User Identity Module (SIM/RUIM) card **138** for communication with a network, such as the wireless network **150**. Alternatively, user identification information may be programmed into memory **110**.

The portable electronic device **100** includes an operating system **146** and software programs, applications, or components **148** that are executed by the processor **102** and are typically stored in a persistent, updatable store such as the memory **110**. Additional applications or programs may be loaded onto the portable electronic device **100** through the wireless network **150**, the auxiliary I/O subsystem **124**, the data port **126**, the short-range communications subsystem **132**, or any other suitable subsystem **134**.

A received signal such as a text message, an e-mail message, or web page download is processed by the communication subsystem **104** and input to the processor **102**. The processor **102** processes the received signal for output to the display **112** and/or to the auxiliary I/O subsystem **124**. A subscriber may generate data items, for example e-mail messages, which may be transmitted over the wireless network **150** through the communication subsystem **104**. For voice communications, the overall operation of the portable electronic device **100** is similar. The speaker **128** outputs audible information converted from electrical signals, and the microphone **130** converts audible information into electrical signals for processing.

The touch-sensitive display **118** may be any suitable touch-sensitive display, such as a capacitive, resistive, infrared, surface acoustic wave (SAW) touch-sensitive display, strain gauge, optical imaging, dispersive signal technology, acoustic pulse recognition, and so forth. A capacitive touch-sensitive display includes one or more capacitive touch sensors **114**. The capacitive touch sensors may comprise any suitable material, such as indium tin oxide (ITO).

One or more touches, also known as touch contacts or touch events, may be detected by the touch-sensitive display **118**. The processor **102** may determine attributes of the touch, including a location of the touch. Touch location data may include data for an area of contact or data for a single point of contact, such as a point at or near a center of the area of contact. The location of a detected touch may include x and y components, e.g., horizontal and vertical components, respectively, with respect to one's view of the touch-sensitive display **118**. For example, the x location component may be determined by a signal generated from one touch sensor, and the y location component may be determined by a signal generated from another touch sensor. A touch may be detected from any suitable input member, such as a finger, thumb, appendage, or other objects, for example, a stylus, pen, or other pointer, based on the nature of the touch-sensitive display **118**. Multiple simultaneous touches may be detected. One or more gestures may also be detected by the touch-sensitive display **118**. A gesture, such as a swipe, also known as a flick, is a particular type of touch on a touch-sensitive display **118** and may begin at an origin point and continue to an end point, for example, a concluding end of the gesture. A gesture may be identified by attributes of the gesture, including the origin point, the end point, the distance travelled, the duration, the velocity, and the direction, for example. A gesture may be long or short in distance and/or duration. Two points of the gesture may be utilized to determine a direction of the gesture. A gesture may also include a hover. A hover may be a touch at a location that is generally unchanged over a period of time or is associated with the same selection item for a period of time. The gesture may be a two dimensional gesture, such as a gesture detected by a touch-sensitive input device, e.g., a touch-sensitive display, a trackpad, and optical joystick, a trackball, and so forth. The gesture may be a three-dimensional gesture, which may be detected by one or more of a camera, a proximity sensor, an optical sensor, and so forth.

The optional actuator(s) **120** may be depressed or activated by applying sufficient force to the touch-sensitive display **118** to overcome the actuation force of the actuator **120**. The actuator(s) **120** may be actuated by pressing anywhere on the touch-sensitive display **118**. The actuator(s) **120** may provide input to the processor **102** when actuated. Actuation of the actuator(s) **120** may result in provision of tactile feedback. When force is applied, the touch-sensitive display **118** is depressible, pivotable, and/or movable. Such a force may actuate the actuator(s) **120**. The touch-sensitive display **118** may, for example, float with respect to the housing of the portable electronic device, i.e., the touch-sensitive display **118** may not be fastened to the housing. A mechanical dome switch actuator may be utilized. In this example, tactile feedback is provided when the dome collapses due to imparted force and when the dome returns to the rest position after release of the switch. Alternatively, the actuator **120** may comprise one or more piezoelectric (piezo) devices that provide tactile feedback for the touch-sensitive display **118**.

Optional force sensors **122** may be disposed in conjunction with the touch-sensitive display **118** to determine or react to forces applied to the touch-sensitive display **118**. The force sensor **122** may be disposed in line with a piezo actuator **120**. The force sensors **122** may be force-sensitive resistors, strain gauges, piezoelectric or piezoresistive devices, pressure sensors, quantum tunneling composites, force-sensitive switches, or other suitable devices. Force as utilized throughout the specification, including the claims, refers to force measurements, estimates, and/or calculations,

such as pressure, deformation, stress, strain, force density, force-area relationships, thrust, torque, and other effects that include force or related quantities. Optionally, force information related to a detected touch may be utilized to select information, such as information associated with a location of a touch. For example, a touch that does not meet a force threshold may highlight a selection option, whereas a touch that meets a force threshold may select or input that selection option. Selection options include, for example, displayed or virtual keys of a keyboard; selection boxes or windows, e.g., "cancel," "delete," or "unlock"; function buttons, such as play or stop on a music player; and so forth. Different magnitudes of force may be associated with different functions or input. For example, a lesser force may result in panning, and a higher force may result in zooming.

A front view of a portable electronic device is shown in FIG. **2**. The touch-sensitive display **118** includes a display area **202** in which information may be displayed, and a non-display area **204** extending around the periphery of the display area. The display area **202** generally corresponds to the area of the display **112**. Information is not displayed in the non-display area **204** by the display **112**, which non-display area **204** is utilized to accommodate, for example, electronic traces or electrical connections, adhesives or other sealants, and/or protective coatings around the edges of the display area. The non-display area **204** may be referred to as an inactive area. The non-display area **204** is typically not part of the physical housing or frame **206** of the electronic device. Typically, no pixels of the display **112** are in the non-display area **204**, thus no image can be displayed by the display **112** in the non-display area **204**. Optionally, a secondary display, not part of the primary display **112**, may be disposed under the non-display area **204**. Touch sensors may be disposed in the non-display area **204**, which touch sensors may be extended from the touch sensors in the display area or distinct or separate touch sensors from the touch sensors in the display area **202**. A touch, including a gesture, may be associated with the display area **202**, the non-display area **204**, or both areas. The touch sensors may extend across substantially the entire non-display area **204** or may be disposed in only part of the non-display area **204**. Touches may be detected, for example, starting in the non-display area **204** and continuing into the display area **202** or starting in the display area **202** and continuing into the non-display area **204**, whether or not touch sensors are disposed in the non-display area **204**. The portable electronic device **100** optionally includes a set of convenience keys or buttons **208**, **1308** that may be separate physical keys or buttons or virtual keys or buttons.

A sequence of responses to various aspects of a gesture is shown in FIG. **3** through FIG. **10**. Previewing second application information with an option to open the second application is described. The electronic device **100** is in a portrait orientation in these examples, although the examples apply to a landscape orientation as well. In this example, a weather application is displayed when a notification occurs. The notification may indicate, for example, an incoming message, such as an email or text message, a missed phone call, a meeting notice, a social networking message, and so forth. The notification may be audible and/or visual. A visual notification may be provided by a separate physical element, e.g., a light emitting diode that blinks, or a displayed notification, such as the virtual notifier **302** that appears as a blinking object on the touch-sensitive display. The notification may be provided for a predetermined period of time or until an action terminates the notification. The notification may optionally activate monitoring for a gesture that indicates a request to display information associated with a second application for which information is not currently being displayed. For example, the monitoring may target detection of a touch at specific locations of the display, such as at or near an edge or side of the display area **202**.

During display of information associated with a first application, the weather application in this example, a gesture is detected. The gesture in this example has an origin associated with a lower edge of the display area **202**, e.g., a swipe that starts in the non-display area **204** and continues onto the display area **202** as shown in FIG. **4**. Throughout the drawings, a current location of the gesture is shown by a dotted circle, and a path of the gesture is shown by a dotted line with an arrow indicating most recent direction (if any) of the gesture. Information associated with the first application is referred to as first application information, and information associated with the second application is referred to as second application information herein. In this example, the path **402** of the gesture is indicated by the dotted line and arrow. The gesture need not be provided in response to the notification and may be detected at any time.

The first application information **404** may optionally be displayed in a background manner, such as in a reduced or gradually reduced size (such as shown in FIG. **4** through FIG. **9**, FIG. **14** through FIG. **17**, FIG. **19**, and FIG. **20**), in a partially or gradually transparent style, in a manner that covers or replaces the first application information with the second application information (such as shown in FIG. **7**, FIG. **8**, FIG. **10**, and FIG. **20**), in a manner that shifts or scrolls the first application information off the touch-sensitive display **118** (such as shown in FIG. **11**, FIG. **15** through FIG. **17**, FIG. **19**, and FIG. **20**) other visual representations, or any combination thereof. The gradual changes in display may optionally take place in response to movement of the gesture or display of the second application information. For example, FIG. **4** and FIG. **5** illustrate that the first application information is reduced in size more as the path **402** of the gesture extends further into the display area **202**.

Optionally, additional information may be displayed with the first application information **404** when this information is displayed in a reduced size. For example, a battery level, time, date, signal strength, and one or more message notifications **502** may be displayed, such as shown in FIG. **5**. The user may be satisfied with the additional information displayed, and may discontinue the gesture, thus returning the display to displaying the first application information.

As the gesture continues in the example sequence, the path **402** of the gesture changes direction in FIG. **6**, which change in direction triggers the beginning of the display of the second application information **602**. In this example sequence, the second application information **602** shifts or scrolls onto the touch-sensitive display **118** from a right side or edge of the display **118** relative to the orientation of the drawing. Thus, the second application information **602** shifts or scrolls onto the display **118** from a side or edge of the display **118** different from the edge associated with the gesture, e.g., where the gesture originated.

Optionally, the second application information **602** is gradually shifted or scrolled onto or off (of) the display **118** along with the movement of the gesture. As the path **402** of the gesture moves to the left as the example proceeds from FIG. **6** to FIG. **7** to FIG. **8**, more of the second application information **602** is gradually displayed. This shifting or scrolling provides a user with the ability to view a part of the second information **602** until the user has seen enough information to decide whether or not to open the second

application. The second application information **602** may optionally be displayed more quickly when the gesture moves more quickly. More of the second application information **602** may optionally be displayed as length of the gesture increases, such as shown in the example in the progression of the gesture from FIG. **6** to FIG. **7** to FIG. **8**. Thus, the amount of information displayed may optionally be proportional to the length of the path of the gesture or the length of a part of the path of the gesture. More of the second application information **602** may optionally be displayed the longer the gesture is maintained or detected by the touch-sensitive display. Thus, the amount of information displayed may optionally be proportional to the duration or length of time of detection of the gesture.

The user is provided with the ability to preview the second application information without opening the application and to optionally open the second application if desired. FIG. **9** illustrates a few different examples of gesture characteristics that terminate the preview of the second application information. For example, the user may have viewed enough information via preview and does not desire to view more information or open the second application. One gesture option to terminate preview includes changing the path **902** of the gesture in a direction toward the edge or side associated with the origin of the gesture, which is the bottom of the display area **202** in this example. Another gesture option to terminate preview includes changing the path **904** of the gesture in a direction toward the edge or side where the second application information began to be displayed, such as the edge where the information shifts or scrolls onto the display area **202**. Another gesture option to terminate preview includes simply discontinuing the gesture, e.g., the input member is removed from the touch-sensitive display **118**.

When the gesture ceases, optionally, the first application information is again displayed on the display **118**, as shown in the example of FIG. **9**. With this option, the first application information **404** may be displayed in a gradually increasing size, may shift or scroll back onto the display area **202**, or may be immediately restored to full or normal display size, such as shown in FIG. **3**.

Upon previewing the second application information **602**, the user may desire to open the second application, for example, to open or send a message. The second application may be opened when the gesture includes a characteristic that indicates opening of the second application. For example, the path **402** of the gesture may continue from FIG. **8** along the optional paths **1002**, **1004** shown in FIG. **10** to open the second application. The paths **1002**, **1004** reflect examples of characteristics or attributes of the gesture that are interpreted by the device **100** to open the second application. One option for the gesture to open the second application is for the path **1002** of the gesture to continue in its current direction until the gesture is associated with another edge or side of the display, such as the edge or side opposite the edge or side where the display of the second application information **602** entered the display, such as shown in FIG. **10**. Another option for the gesture to open the second application is for the path **1004** of the gesture to change direction, such as toward the edge or side opposite the edge or side where the display of the second application information **602** entered the display, such as shown in FIG. **10**. Another option is to automatically open the second application when the second application information covers available display area in response to the gesture, for example, when the second application information is displayed across a vertical or horizontal extent of the display area **202** or a vertical or horizontal extent of a window, frame, or field in which the second application information is displayed. A tool bar **1006** may optionally be displayed.

Some of the examples herein show an option where the first application information is displayed in a reduced size. Another option in these examples retains the reduced-size first application information at a fixed location on the display **118** as the second application information covers or replaces the first application information on the display **118**. Optionally, the first application information may be displayed without changing the size of the information, i.e., in the same size, such as shown in FIG. **11**. When the first application information is displayed same-size, the first application information may be retained at a fixed location on the display **118** as the second application information covers or replaces the first application information on the display **118**, or the first application information may be shifted or scrolled off the display **118** as the second application information is shifted or scrolled on the display **118**, such as shown in FIG. **11**. Less first application information, e.g., quantity of information or area of display covered by the information, may be displayed as more second application information is displayed.

A flowchart illustrating a method of controlling display of information for two applications is shown in FIG. **12**. The method may be carried out by software executed, for example, by the processor **102** of the electronic device, which may be a portable electronic device **100**. Coding of software for carrying out such a method is within the scope of a person of ordinary skill in the art given the present description. The method may contain additional or fewer processes than shown and/or described, and may be performed in a different order. Computer-readable code executable by at least one processor of the portable electronic device to perform the method may be stored in a computer-readable storage medium, device, or apparatus, which may be a non-transitory or tangible storage medium.

Information associated with a first application is displayed **1202** on a display, for example, on a touch-sensitive display **118**. The image or information may include information associated with any suitable application or aspect or element of an application, such as email (also referred to as electronic mail), text messaging, calendar, tasks, address book or contacts, media player, home page, icon (including active icons) or widget display page, universal inbox (also referred to as a mailbox), or any other suitable application in or for which information is displayed by or on an electronic device **100**. Information associated with email may include a list of email messages, information associated with a calendar may include a meeting schedule, calendar day view, week view, month view, or agenda view, information associated with an address book may include a listing of contacts, information associated with a media player may include text, pictures, videos, or artwork related to music or other media. The applications and information are not limited to the examples provided.

A gesture that indicates a request to display information associated with a second application is detected **1204**. Detection of the gesture triggers display of the second application information. The gesture may be considered to be a command associated with the second application, which command requests, controls, or causes at least part of the second application information to be displayed.

An appropriate gesture is advantageously assigned to request display of information associated with a second application. Advantageously, unintentional display of information is avoided. Thus, the gesture is associated with the

second application. The gesture may be associated with a specific location, such as an edge (or side) or corner of the touch-sensitive display **118**, or a displayed item or element, such as a special indicator, e.g., a ghosted symbol or word, or a header for an application. The gesture may have detectable attributes or characteristics, such as movement, direction, change in direction, shape, duration, length, force, speed, time associated with a given location as with a hover, number of simultaneous touch locations, number of taps, use in conjunction with a physical key, button, or other input device, and so forth. The gesture may comprise depression of a touch-sensitive display **118** that actuates an actuator **120**, such as described above. The gesture may comprise any combination of the above characteristics or attributes.

A few examples of a gesture are as follows. The gesture may be associated with an edge or side of the display area **202** and extends into or enters the display area **202**. A gesture associated with an edge or side of the display area **202** may be, for example, a gesture detected by touch sensors in the non-display area **204**, a gesture that starts outside the display area **202** and continues onto the display area, a gesture having a touch location (e.g., an origin of the gesture) that is at or near an outer perimeter of the display area **202**, and so forth. A corner of the display area **202** may be associated with one or both edges or sides that meet at the corner. The gesture may be a hover or other gesture that remains associated with a specific location for a period of time, such as the sustained touch at a location **2002** associated with a corner of the touch-sensitive display **118** as shown in the example of FIGS. **20** and **21** or a displayed image such as the icon **2704** in FIG. **27**. The input may be a compound gesture, for example, a touch sustained at a specific location, such as a corner or side of the display, while a swipe is detected. The gesture may be input directly via an input device, e.g., a touch-sensitive display, optical joystick, and so forth, and may include other types of gestures such as 3D gestures or physical gestures involving movement of the electronic device **100**. The gesture need not be associated with an edge or side.

The second application may be any suitable application, such as described above. The second application information is also described above. For example, the second application may be a message application, and the second application information that is displayed is the inbox for the messaging application. The inbox may be a universal inbox, which may include any or all of the following, for example, emails, meeting notifications, text messages of any type, missed phone call notifications, social networking messages, system messages, news feed messages, download progress messages, subscribed information messages, and so forth. The second application may alternatively be a calendar, an address book, home screen, and so forth. The second application may alternatively be a notification application that manages notifications of various sorts, including notifications related to email, text, missed phone calls, calendar, social networking, and device warnings, such as low battery or lost communication connection, to name a few.

The first application information and second application information are displayed **1206**. For example, the second application information may be displayed in increasing quantity as the first application information is displayed in decreasing quantity. The displayed second application information may be a preview (or peek) of the second application information, including, for example, a subset or part of all the available second application information. For example, when the second application is an email application, the last five emails may be displayed, when the second application is an address book, the ten most often accessed contacts may be displayed, and so forth. The preview may be displayed without opening or launching the second application, in which case the previewed information may be retrieved from stored information and/or information received via a communication network **150**. Previewing or displaying without opening the second application is typically a faster process than opening the second application.

While previewed, second application information is viewable and active application functions are not operable other than to display more or less of the information. For the example of previewing a messaging inbox, email messages cannot be opened and new emails cannot be initiated during a preview, although the titles, senders, and time information are viewable. For the example of previewing a calendar, existing calendar events cannot be opened and new calendar events cannot be initiated during a preview, although the titles, meeting initiator, and time information are viewable. The second application may optionally be opened to engage active application functions. The preview of the second application information is displayed, for example, for the time duration of the gesture or until the second application is opened or activated.

While the gesture continues **1208**, the second application information may optionally be displayed by shifting or scrolling **1210** the information onto or off (of) the touch-sensitive display **118**. The shifting optionally occurs in accordance with movement of the gesture. For example, more information may be displayed as the gesture moves in a forward direction and less information may be displayed as the gesture moves in a reverse direction. A forward direction may be, for example, the direction that the information takes as it progresses onto the display **118**, and the reverse direction is the opposite direction to the forward direction. The shifting or scrolling of the second application information may continue as long as the gesture continues or until the second application is opened **1214** in response to detecting **1212** an indication to open the second application. The first application information may optionally shift or scroll off the display **118** as the second application information scrolls onto the display **118**. Similarly, the first application information may optionally shift or scroll onto the display **118** as the second application information scrolls off the display **118**. Thus, the method provides a preview of second application information without opening the second application while providing an easily executed option to open the second application.

A sequence of responses to various aspects of gestures is shown in FIG. **13** through FIG. **21**. Previewing second application information with an option to open the second application are described. Descriptions of features and aspects described above will not be repeated for the sake of brevity. The electronic device **100** is in a landscape orientation in these examples, although the examples apply to a portrait orientation as well. The portable electronic device **100** in FIG. **13** through FIG. **21** has a different form factor than the form factor of the portable electronic device **100** of FIG. **2** through FIG. **11**. The method described herein applies any form factor.

The first application in this example is the same weather application from the above examples, although the information is displayed in a landscape orientation, as shown in FIG. **13**. A notification, such as described above, may optionally be provided, such as the virtual notifier **302**. The gesture that indicates a request to display information associated with a second application is detected. The gesture in this example has an origin associated with a right edge or side of the

display area **202**, e.g., a swipe that has a path **1402** that starts in the non-display area **204** and continues onto the display area **202** toward the left as shown in FIG. **14**. The gesture need not be provided in response to the notification and may be detected at any time.

As shown in FIG. **15**, the second application information **1502** shifts or scrolls onto the display **118** beginning at the right side or edge of the display **118** when the gesture is detected, which may include a slight delay. In this example, the second application information **1502** scrolls or shifts onto the display **118** from the same edge or side associated with the gesture.

As shown in the progression of path **1402** of the gesture from FIG. **15** to FIG. **16** to FIG. **17**, the second application information **1502** shifts or scrolls onto or off (of) the display **118** along with or in accordance with movement of the gesture. For example, when the gesture moves to the left, the information moves proportionately to the left; when the gesture moves to the right, the information moves proportionately to the right. Similarly, when the gesture moves up or down, the information moves proportionately up or down, respectively, such as shown in the example of FIG. **19**. As described above, the first application information may shrink or shift or scroll off the display **118** as the second application information shifts or scrolls onto the display **118**.

The preview or display of the second application information **1502** may end as described above, e.g., upon cessation of the gesture, when the second application information **1502** is scrolled or shifted off the display **118**, and so forth. The preview terminates when the second application is opened or launched. As before, upon previewing the second application information **1502**, the user may desire to open the second application, for example, to open or send a message. The second application may be opened when the gesture includes a characteristic that indicates opening of the second application. For example, the path **1402** of the gesture may continue along the optional paths **1802**, **1804** shown in FIG. **18** to open the second application. The paths **1802**, **1804** reflect examples of characteristics or attributes of the gesture that are interpreted by the device **100** to open the second application. One option for the gesture to open the second application is for the path **1802** of the gesture to continue in its current direction until the gesture is associated with another edge or side of the display, such as the edge or side opposite the edge or side where the display of the second application information **1502** entered the display, such as shown in FIG. **18**. Another option for the gesture to open the second application is for the path **1804** of the gesture to change direction, such as toward the edge or side opposite the edge or side where the display of the second application information **602** entered the display, such as shown in FIG. **18**. Another option is to automatically open the second application when the second application information covers available display area in response to the gesture, for example, when the second application information is displayed across a vertical or horizontal extent of the display area **202** or a vertical or horizontal extent of a window, frame, or field in which the second application information is displayed. A tool bar **1806** may optionally be displayed.

Second application information may scroll or shift onto the display **118** from a different edge or side, such as the bottom of the display area **202**, such as shown in FIG. **19**. In this example, the gesture is associated with the same edge from which the scrolling or shifting begins, although the gesture may originate from any edge or side or corner.

Different gesture types other than moving gestures may be utilized to preview the second application information. As shown in the example of FIG. **20** and FIG. **21**, a gesture comprising a stationary touch or hover at a location **2002** associated with one of the corners of the display area **202** initiates the preview, which continues as described above. An icon may optionally be displayed at the location **2002**. More of the second application information **1904** may optionally be displayed the longer the gesture is maintained or detected by the touch-sensitive display **118** at the location **2002**. In the example of FIG. **20**, the first application information is displayed same-size, and the first application information is retained at a fixed location on the display **118** as the second application information covers or replaces the first application information on the display **118**. The preview may terminated, for example, when the gesture ceases to be detected or moves to a substantially different location. The second application may be opened, for example, when a second touch is detected at a location **2102** associated with a different corner, such as shown in FIG. **21**.

When preview is terminated, display of the second application information may optionally be shifted off or scrolled off the display **118** along with movement of the gesture or over a period of time. The second application information may recede in the direction in which the information was displayed or may continue off the opposite edge of the display area **202** from which display began. Optionally, the display of the second application information may be immediately terminated or faded gradually off the display.

In the above examples, the gesture is a continuous gesture while displaying the at least part of the second application information without opening the second application. Although other non-continuous gestures may be utilized, a continuous gesture facilitates a more smooth display of the information as well as more quickly changing what is displayed as well as the end of the display of the second application information. The user is provided with the ability to preview as much second application information as desired without opening the second application, with the option to quickly and easily open the second application at any time with the same gesture utilized to preview the second application information. The method described herein is a natural and efficient method for previewing information with an option to open the application. Because previewing is typically faster than opening the second application, battery is conserved as well as providing a more efficient interface to the user because the user is able to obtain information without being required to open the second application.

Although the second application is opened in the above examples with a continuation of the gesture, other input may be utilized to open the second application, such as a second gesture that overlaps in time with the original gesture that indicates a preview, a menu selection, depression of a physical key, and so forth.

The second application information is displayed in the above examples starting from the right or the bottom edge or side of the touch-sensitive display **118**, which has the advantage of displaying the information in a left-to-right manner or chronologically, respectively. Nevertheless, display of the second application information may start from any edge or side of the display **118**. For example, display of the second application information may begin from the left side, as if the second application information appears to be below or completely obscured by the first application information, and a gesture beginning at the left reveals the second application information beginning at the left edge or side.

A flowchart illustrating a method of controlling display of information of images is shown in FIG. **22**. The method may be carried out by software executed, for example, by the processor **102** of the electronic device, which may be a portable electronic device **100**. Coding of software for carrying out such a method is within the scope of a person of ordinary skill in the art given the present description. The method may contain additional or fewer processes than shown and/or described, and may be performed in a different order. Computer-readable code executable by at least one processor of the portable electronic device to perform the method may be stored in a computer-readable storage medium, device, or apparatus, which may be a non-transitory or tangible storage medium.

A first image is displayed **2202** on a display, for example, on a touch-sensitive display **118**. A gesture that indicates a request to display information associated with a second image is detected **2204**. Detection of the gesture triggers display of the second image. The gesture may be considered to be a command associated with the second image, which command requests, controls, or causes at least part of the second image to be displayed. Characteristics of an appropriate gesture and examples of such gestures are described above.

The first image and second image may include information associated with one or more applications, information elements or features of an application, documents or files created with an application, and so forth. The images may be associated with any suitable application, such as email, text messaging, calendar, tasks, address book or contacts, media player, home or icon display page, universal inbox, or any other suitable application for which the image including information is displayed by or on an electronic device **100**. An image associated with email may include information such as a list of email messages, an image associated with a calendar may include a meeting schedule, calendar day view, week view, month view, or agenda view, an image associated with an address book may include a listing of contacts, an image associated with a media player may include text, pictures, videos, or artwork related to music or other media. The first image and second image may be related to different applications or the same application. The images may be related to the same application in different ways. The images may include information of different elements, aspects, or features of the application that include different information related to the application, such as an inbox, email message, a message attachment or document, and an account listing that includes the inbox among the accounts. The different elements, aspects, or features of an application may be hierarchically organized and any part of an application may be previewed from any other part. For example, the first image may include information from an inbox, such as a universal inbox, and the second image may include information from a message from the inbox. In another example, the first image may include information from a message, and the second image may include information from the inbox. In other examples, one of the images may include information from a document associated with an email message, such as an attachment or webpage launched from a link in the email message. Another example of an image includes an account listing for one or more accounts associated with the electronic device **100**. The applications and information are not limited to the examples provided.

The first image and second image are displayed **2206**. For example, the second image may be displayed in increasing quantity or size as the first application information is displayed in decreasing quantity or size. The displayed second image may be a preview (or peek) of the second image, including, for example, a subset or part of all the available information for the second image. For example, when the second image is associated with an email application, the last five emails may be displayed, when the second application is an address book, the ten most often accessed contacts may be displayed, and so forth. The preview may be displayed without opening or launching the associated application, in which case the previewed information may be retrieved from stored information and/or information received via a communication network **150**. Previewing or displaying without opening the associated application is typically a faster process than opening the application. The preview may alternatively be displayed when the application is already open, although not necessarily displayed.

While previewed, an image is viewable and active application functions associated with the second image may not be operable other than to display more or less of the information. For the example of previewing a messaging inbox, email messages cannot be opened and new emails cannot be initiated during a preview, although the titles, senders, and time information are viewable. For the example of previewing a calendar, existing calendar events cannot be opened and new calendar events cannot be initiated during a preview, although the titles, meeting initiator, and time information are viewable. The associated application may optionally be opened to engage active application functions. The preview of the second image is displayed, for example, for the time duration of the gesture or until the second image is fully displayed or activated, e.g., when the second image replaces the first image or fills substantially the whole display, window, frame, or field in which the information is displayed.

While the gesture continues **2208**, the relative size of display of the first image and the second image may be adjusted. For example, the second image may optionally be displayed by shifting, sliding, or scrolling **2210** the second image onto the display as the first image is shifted, slid, or scrolled off (of) the touch-sensitive display **118**. Similarly, the second image may optionally be displayed by shifting, sliding, or scrolling **2210** the second image off the display as the first image is shifted, slid, or scrolled onto the touch-sensitive display **118**. The amount or size of display of the images may optionally take place in response to movement of the gesture. The display of the images may progressively increase in size or decrease in size along with movement of the gesture. For example, the display of the second images may progressively increase in size as the gesture continues, e.g., in a first direction, along a given path, or simply continues in time. The display of the second image may progressively decrease in size when the gesture changes direction, e.g., reverses direction. As the second image take up more space on the display or increases in size, the first image takes up less space on the display or decreases in size. For example, more of the second image may be displayed as the gesture moves in a forward direction and less information may be displayed as the gesture moves in a reverse direction. A forward direction may be, for example, the direction that the information takes as it progresses onto the display **118**, and the reverse direction is the opposite direction to the forward direction.

Optionally, a third image may be displayed **2212** in addition to the first image and the second image. The third image may be an intermediate image. For example, when the first image is an attachment or other document opened from a message, and the second image is at least a part of an inbox

(or universal inbox), the third image may be at least part of the message. For example, the third image may be displayed between the first message and the second message, and may be displayed with the first image in a leafed format, such as shown in FIG. **31**. In an example where an attachment is displayed before previewing or displaying an inbox, when the gesture is detected, the third image of the message and the second image of the inbox are displayed and the first image of the attachment is reduced. As the gesture continues, the second image is increased in size and information as the third image and the first image are reduced in size. Any number of intermediary images may be displayed.

The adjusting of display of the first and second images may continue as long as the gesture continues or until the second image is displayed and the first image is no longer displayed **2216** in response to detecting **2214** an indication to provide such a display, such as when a threshold for the gesture is met. The threshold may include a distance traveled by the gesture in one direction, a time duration of the gesture, the gesture passing a location on the display **112**, and so forth. For example, the application associated with the second image may be opened at **2216**. Thus, the method provides a preview of a second image without opening an application associated with the second image while providing an easily executed option to open the associated application. The preview or peek may alternatively be displayed when the application is running on the device **100**, although not currently displayed.

Reducing display of an image includes displaying the image in a smaller size, in a partially or gradually transparent style, in a manner that covers, obscures, or replaces the first image with a second image, in a manner that shifts, scrolls, or slides the first image off the touch-sensitive display **118**, other visual representations, or any combination thereof. Thus, reducing may include reducing the amount or quantity of information displayed for the image.

In the example of FIG. **23**, while an image **2302** is displayed, a notification, such as the virtual notifier **302**, is provided. The notification may be both visual and audible. The visual notification may be provided on the display **112** as a virtual notifier **302** or via a separate visual component such as a light-emitting diode. The user may wish to know what type of message arrived that caused provision of the notification. The user may gesture to view or preview a notification bar. As shown in FIG. **24**, a gesture is detected along the path **2402**. The gesture starts at the left edge in this example. In response to detecting the gesture in this example, one or more icons **2404** are displayed at or near the edge where the gesture began while the display of the image is reduced, as described above. The display may be gradual in that more of the icons are displayed as the gesture continues in time or distance. The icons **2404** may represent different messaging or communication applications, such as one or more email accounts, one or more text accounts or types of texts, one or more social networking applications, one or more calendar applications, one or more voice message applications, and so forth. Optionally, an indicator **2406**, such as a number, may be displayed to indicate how many unread messages are present for the application. The icon **2404** displayed on top may represent the application from which the most recent message arrived, such as the message that arrived that caused the notification to be provided prior to detecting the gesture. Although the icons **2404** are displayed in a column on the left side of the display **112**, the icons **2404** may alternatively be displayed in a column on the right side or in a row at the top or bottom of the display **112**. Optionally, the icons **2404** may be displayed along the edge where the gesture originates.

Examples relating to previewing or peeking of different images or information are shown in FIG. **25** through FIG. **32**. An image of an application that is a universal inbox including a list of a plurality of elements shows the latest information from the universal inbox displayed in chronological order in FIG. **25**. A gesture is detected including a touch at a location **2502** associated with an element of the inbox, which is an email in this example. Information elements for a universal inbox include email messages, text messages, calendar events, voice messages, missed call messages, social networking messages, composition windows or screens or a draft message, and so forth. Other applications may have information elements, such as a document or file created by the application, for example, a text document created by a text application, a spreadsheet created by an accounting program, a media file for a media player, and so forth. Menus or navigation windows, such as tabs or overflow lists, may also be information elements associated with an application and may be previewed. In response to detecting a gesture, at least a part of an element may be displayed or previewed while reducing display of the first image. For example, in response to detecting the gesture, an image of the email message **2602** is gradually displayed or previewed as the image of the inbox is reduced, such as shown in FIG. **26**. The amount or size of the message **2602** displayed may be adjusted along with the gesture, which is at touch location **2604** in FIG. **26**, e.g., as the gesture including the touch locations **2502** and **2604** continues. When the gesture discontinues prior to opening the message, the display of the message discontinues, and the image of the inbox is displayed.

When the gesture extends across the display or meets a time or distance threshold, the message is opened for display and interaction, such as shown in FIG. **27**. While the message **2702** is displayed, a notification in the form of a virtual notifier **302** is displayed as shown in FIG. **27**. A gesture is detected along the path **2802** as shown in FIG. **28**, in response to which gesture an image of an updated inbox is displayed or previewed while reducing display of the message. In this example, the message shifts, slides, or scrolls off the display as more of the image of the updated universal inbox is displayed or previewed. The amount of the universal inbox displayed may be progressively increased or decreased as the gesture moves along the display **118**. Thus, the gesture may control how much of the image of the inbox is displayed or previewed. In this example, the gesture is discontinued prior to displaying the image of the universal inbox across the display or displaying the full width (or height) of the universal inbox. For example, the user may see enough information in the updated image of the universal inbox, e.g., the new text message from Michael Lan asking about lunch at the top of the universal inbox, and the user discontinues the gesture. The message previously reviewed, such as shown in FIG. **27**, is displayed again. The image of the message may snap back across the display **112** or may gradually shift, slide, or scroll back until displayed across the display **112**. Alternatively, the image of the universal inbox may be displayed across the display **112** when the gesture crosses the display or a threshold distance, time, or location of the gesture is met.

A document, such as an attachment, webpage, or contact, may be enclosed with a message such as an email. For example, while the image of the email is displayed, a gesture such as a tap is detected at a location **2902** associated with

a display of a representation of a document as shown in FIG. **29**. In response to the detecting, an image of the document **2904**, which is a map, is displayed. The document **2904** may be scrolled, shifted, or slid onto the screen until the document **2904** covers the width display area **202** or the window, frame, or field in which the document **2904** is displayed.

While the document **2904** is displayed, a notification in the form of a virtual notifier **302** is displayed as shown in FIG. **30**. In this example, the user decides to view the inbox to see what message came in and makes a gesture to preview the inbox. The gesture is detected along the path **3102**, and the image of the updated universal inbox is displayed as shown in FIG. **31**. A new meeting notice is marked with * in a circle to indicate a new or unread message. The part or size of the image of the updated universal inbox displayed or previewed may progressively increase or decrease along with movement or path **3102** of the gesture. For example, more of the image of the updated universal inbox may be displayed as the gesture continues in the same direction as the path **3102** of FIG. **31**, and less of the image of the updated universal inbox may be displayed as the gesture continues in a different direction such as the opposite direction of the path **3102** shown in FIG. **31**. The display of the document **2904** is reduced or increased as the display of the image of the updated universal inbox is increased or decreased, respectively. Optionally, a part of the element may also be displayed in addition to the image of part of the document. As shown in the example of FIG. **31**, the universal inbox is displayed or previewed while an image of part of the message **2702** is displayed along with an image of part of the document **2904** related to the element **2702**, which document is the map **2904**. The three images may be displayed to give the appearance of a leafed or layered arrangement of these images, with the inbox on the bottom, the message in the middle, and the map on top. The display of the part of the image of the universal inbox, and optionally the display of message **2702** (if displayed), may be discontinued when the gesture is no longer detected. When such display is discontinued the map image is displayed, such as shown in FIG. **30**. When the gesture meets a threshold, such as a time, distance, or location of the gesture, the document and message, if applicable, is no longer displayed, and the image of the updated universal inbox is displayed.

Another option includes displaying or previewing a document from a related information element. For example, the map attachment may be previewed in response to detecting a gesture along the path **3202** that starts at the right edge of the display **112** and continues to the left in FIG. **32**. More or less of the attachment is displayed as the gesture moves to the left or right, respectively, along the display.

Optionally, an indication of an order of the application, the element, and the related document may be displayed to facilitate navigation or previewing of these items. The indication may indicate a direction for a gesture to display at least part of the application, at least part of the element, and at least part of the document, e.g., left or right, up or down, and so forth. Optionally, one or more icons or selection items **2704**, such as shown in FIG. **27**, may be displayed to navigate or preview between images or layers of an application, such as the main application information, an information element, and a document. When a touch is detected that is associated with the icon **2704**, the display is changed as either information is displayed or previewed from a different image or layer.

In another example, the element may be a compose screen or window for a message or calendar event. The user may peek or preview the inbox from the compose screen or window with a gesture. In response to detecting a gesture, an image of the inbox is displayed or previewed as display of the compose screen is reduced. When the gesture meets a threshold length or distance, including a gesture across the width of the display, the image of the inbox is open, the compose screen or window is closed, and the element is saved as a saved element when the element includes unsaved changes. An indication of the saved element may be displayed with the image of the inbox. For example, when an email is composed but not saved, and the gesture meets the threshold, the email is automatically save, and an indication of the saved message is displayed as part of the image of the inbox.

A flowchart illustrating a method of controlling display of information for two applications is shown in FIG. **33**. The method may be carried out by software executed, for example, by the processor **102** of the electronic device, which may be a portable electronic device **100**. Coding of software for carrying out such a method is within the scope of a person of ordinary skill in the art given the present description. The method may contain additional or fewer processes than shown and/or described, and may be performed in a different order. Computer-readable code executable by at least one processor of the portable electronic device to perform the method may be stored in a computer-readable storage medium, device, or apparatus, which may be a non-transitory or tangible storage medium.

Information or an image associated with a first application is displayed **3302** on a display **112**, for example, on a touch-sensitive display **118**. The information may include information associated with any suitable application or aspect or element of an application, such as email (also referred to as electronic mail), text messaging, calendar, tasks, address book or contacts, media player, home page, icon (including active icons) or widget display page, universal or unified inbox (also referred to as a mailbox), or any other suitable application in or for which information is displayed by or on an electronic device **100**. Information associated with email may include a list of email messages, information associated with a calendar may include a meeting schedule, calendar day view, week view, month view, or agenda view, information associated with an address book may include a listing of contacts, information associated with a media player may include text, pictures, videos, or artwork related to music or other media. The applications and information are not limited to the examples provided.

A gesture that indicates a request to display an inbox or inbox information is detected **3304**. Detection of the gesture triggers display of the inbox as described below. The gesture may be considered to be a command associated with the inbox, which command requests, controls, or causes at least part of the inbox information to be displayed. The inbox may be a universal or unified inbox that includes information or messages from two or more applications, such as one or more email accounts, one or more text messaging accounts, one or more voice messaging accounts, one or more calendars, one or more social networking accounts, other communication applications, and so forth. The applications supported by the inbox may be user-selected, may result from default settings of the device **100**, may be generated from applications installed on the device, **100**, and so forth.

An appropriate gesture is advantageously assigned to request display of the inbox. Thus, the gesture is associated with the inbox. Advantageously, unintentional display of information may avoided by selecting certain types of gestures, such as gestures that change direction or are

associated with specific locations on a display **112**. The gesture may be associated with a specific location, such as an edge (or side) or corner of the touch-sensitive display **118**, or a displayed item or element, such as a special indicator, e.g., a ghosted symbol or word, or a header for an application. The gesture may have detectable attributes or characteristics, such as movement, direction, change in direction, shape, duration, length, force, speed, time associated with a given location as with a hover, number of simultaneous touch locations, number of taps, use in conjunction with a physical key, button, or other input device, and so forth. The gesture may comprise depression of a touch-sensitive display **118** that actuates an actuator **120**, such as described above. The gesture may comprise any combination of the above characteristics or attributes.

A few examples of a gesture are as follows. The gesture may be associated with an edge or side of the display area **202** and extends into or enters the display area **202**. A gesture associated with an edge or side of the display area **202** may be, for example, a gesture detected by touch sensors in the non-display area **204**, a gesture that starts outside the display area **202** and continues onto the display area, a gesture having a touch location (e.g., an origin of the gesture) that is at or near an outer perimeter of the display area **202**, and so forth, such as shown in FIG. **34** through FIG. **37**. A corner of the display area **202** may be associated with one or both edges or sides that meet at the corner. The gesture may be a hover or other gesture that remains associated with a specific location for a period of time, such as the sustained touch at a location **2002** associated with a corner of the touch-sensitive display **118** as shown in the example of FIGS. **20** and **21** or a displayed image such as the icon **2704** in FIG. **27**. The input may be a compound gesture, for example, a touch sustained at a specific location, such as a corner or side of the display, while a swipe is detected. The gesture may be input directly via an input device, e.g., a touch-sensitive display, optical joystick, and so forth, and may include other types of gestures such as 3D gestures or physical gestures involving movement of the electronic device **100**. The gesture need not be associated with an edge or side.

The gesture may be detected **3304**, for example, within a short period of time of the electronic device **100** receiving a message, e.g., an email or any other communication message. The device **100** may provide an audible and/or a visual notification of the message to alert the user of the device **100**. The visual notification may be provided on the display **112** as a virtual notifier **302**, **3404** or via a separate visual component such as a light-emitting diode (LED). When the latest or last message received is part of the inbox **3306**, the process continues at **3308**. The message is part of the inbox when the message is associated with or for an application that is supported by the inbox, as described above. When the latest message received is not part of the inbox **3306**, the process continues at **3318**. The message is part of the inbox when the message is associated with or for an application that is not supported by the inbox, as described above. For example, the user may include work-related email, calendar, text messaging, and voice messaging applications with the inbox, and the user may not include personal email, calendar, text messaging, voice messaging, and social networking applications with the inbox.

The first information and the inbox are displayed **3308**. For example, the inbox information may be displayed in increasing quantity as the first information is displayed in decreasing quantity as the gesture continues. The displayed inbox information may be a preview or peek of the inbox, including, for example, a subset or part of all the available inbox information. For example, a page of inbox entries may be displayed. The preview may be displayed without opening or launching the inbox, in which case the previewed information may be retrieved from stored information and/or information received via a communication network **150**. Previewing or displaying without opening the inbox is typically a faster process than opening the inbox.

While previewed, inbox information is viewable and active application functions are not operable other than to display more or less of the information. For example, email messages cannot be opened and new emails cannot be initiated during a preview, although the titles, senders, and time information are viewable. For the example of previewing a calendar, existing calendar events cannot be opened and new calendar events cannot be initiated during a preview, although the titles, meeting initiator, and time information are viewable. The inbox may optionally be opened to engage active inbox functions. The preview of the inbox information is displayed, for example, for the time duration of the gesture or until the inbox is opened or activated.

While the gesture continues **3310**, the inbox may optionally be displayed by shifting or scrolling **3312** the information onto or off (of) the display **112**. The shifting optionally occurs in accordance with movement of the gesture. For example, more inbox information may be displayed as the gesture moves in a forward direction and less inbox information may be displayed as the gesture moves in a reverse direction. A forward direction may be, for example, the direction that the inbox information takes as it progresses onto the display **112**, and the reverse direction is the opposite direction to the forward direction. The shifting or scrolling of the inbox information may continue as long as the gesture continues or until the inbox is opened **3316** in response to detecting an indication to open the inbox, such as when a characteristic of the gesture is met **3314**. The first information may optionally shift or scroll off the display **112** as the inbox information scrolls onto the display **112**. Similarly, the first information may optionally shift or scroll onto the display **112** as the inbox application information scrolls off the display **112**. Thus, the method provides an option of a preview of inbox information without opening the inbox while providing an easily executed option to open the inbox. Once the gesture characteristic is met, the inbox is displayed **3316** without displaying the first information. A tool bar may optionally be displayed when the inbox is fully displayed or opened. When the gesture terminates or ends before the gesture characteristic is met, the process continues at **3302**, where the first information is displayed, and the inbox information is not displayed. The inbox information may quickly roll off the display **112** or snap back off the display **112** when the gesture ends in this manner.

The characteristics or attributes of the gesture are interpreted by the device **100** to determine whether the gesture characteristic is met **3314**. The characteristics may include the path or shape of the gesture, the length or distance of the gesture, the distance of the gesture from a side or edge of the display, the time duration of the gesture, whether the gesture passes a fixed point on the display, any combination of characteristics, and so forth.

The first information, the inbox, and one of more visual notification icons are displayed **3318**, such as the visual notification icons **3604** shown in FIG. **36**. The visual notification icons may be similar to the icons **502**, **2404** described above. The visual notification icons may be displayed at or near the edge of the display where the gesture began. The display may be gradual in that more of the visual notification icons are displayed as the gesture continues in

time or distance. The visual notification icons may represent different messaging or communication applications, such as one or more email accounts, one or more text accounts or types of texts, one or more social networking applications, one or more calendar applications, one or more voice message applications, and so forth. Optionally, an indicator **3606**, such as a number, may be displayed to indicate how many unread messages are present for the application, such as shown in FIG. **36**. The visual notification icon displayed on top may represent the application from which the most recent message arrived. Alternatively, the visual notification icons may be displayed in fixed locations. The visual notification icons may be displayed in a column on the left side or edge of the display **112**, such as shown in FIG. **36**, in a column on the right side or edge of the display, or in a row at the top or bottom of the display **112**. For example, the visual notification icons may be displayed on the top or bottom when the device is in a landscape orientation. The plurality of visual notification icons may be referred to as a sidebar, a compact sidebar, or notification bar.

When the visual notification icons and inbox are first displayed **3318**, the visual notification icons may be displayed first, the inbox may be displayed first, or the visual notification icons and inbox may begin to be displayed at the same time. For example, the visual notification icons may be displayed when the gesture crosses a threshold on the display **112**. For example, the visual notification icons and inbox information may be displayed in increasing quantity as the first information is displayed in decreasing quantity as the gesture continues. The displayed visual notification icons and inbox information may be a preview or peek of the inbox, including, for example, a subset or part of all the available inbox information. For example, a page of inbox entries may be displayed.

The preview may be displayed without opening or launching the inbox, in which case the previewed information may be retrieved from stored information and/or information received via a communication network **150**. Previewing or displaying without opening the inbox is typically a faster process than opening the inbox. The visual notification icons may be inactive or may optionally be active, wherein selection of the visual notification icon results in opening an application associated with the visual notification icons. The visual notification icons may be inactive during the gesture and may become active or selectable when the inbox is opened or fully displayed. Alternatively, the visual notification icons may be active or selectable whenever displayed, e.g., during a preview or peek or when the inbox is open. The visual notification icons may be active or selectable by rendering these icons on the display with an attribute of selectability. When a touch associated with an active visual notification icon is detected, navigation to a view correlated with the associated visual notification icon results. For example, when a touch associated with a visual notification icon for a calendar is detected, the calendar application is opened. Previewing of inbox information is described in more detail above.

While the gesture continues **3320**, the visual notification icons and the inbox may optionally be displayed by shifting or scrolling **3322** the inbox information onto or off (of) the display **112**. The visual notification icons are optionally displayed in a small area, although the area in which the inbox is displayed may optionally increase or decrease along with movement of the gesture. For example, more inbox information may be displayed as the gesture moves in a forward direction and less inbox information may be displayed as the gesture moves in a reverse direction. A forward direction may be, for example, the direction that the inbox information takes as it progresses onto the display **112**, and the reverse direction is the opposite direction to the forward direction. The shifting or scrolling of the inbox information may continue as long as the gesture continues or until the inbox is opened **3326** in response to detecting an indication to open the inbox, such as when a characteristic of the gesture is met **3324**. The first information may optionally shift or scroll off the display **112** as the inbox information scrolls onto the display **112**, while the visual notification icons remain displayed. Similarly, the first information may optionally shift or scroll onto the display **112** as the inbox application information scrolls off the display **112**, while the visual notification icons remain displayed. Thus, the method provides an option of a preview of inbox information without opening the inbox while providing an easily executed option to open the inbox. Once the gesture characteristic is met, the visual notification icons and the inbox are displayed **3326** without displaying the first information. A tool bar may optionally be displayed when the inbox is fully displayed or opened. When the gesture terminates or ends before the gesture characteristic is met, the process continues at **3302**, where the first information is displayed, and the visual notification icons and the inbox information are not displayed. The visual notification icons and the inbox information may quickly roll off the display **112** or snap back off the display **112** when the gesture ends in this manner.

The characteristics or attributes of the gesture are interpreted by the device **100** to determine whether the gesture characteristic is met **3324**. The characteristics may include the path or shape of the gesture, the length or distance of the gesture, the distance of the gesture from a side or edge of the display, the time duration of the gesture, whether the gesture passes a fixed point on the display, any combination of characteristics, and so forth.

Examples in accordance with the flowchart of FIG. **33** are shown in FIG. **34** through FIG. **37**. In one example, the device may be in the state shown in FIG. **3** or FIG. **13**, when a weather application **404** is active. A message is received that results in providing a visual notification, such as via LED visual notification **3406** as shown in FIG. **34**. In this example, the received message is for an application that is supported by the inbox, thus detecting the gesture **3402** results in shifting or revealing of the inbox onto the display **112** as the first information **404** is shifted off the display **112**. A visual identifier or notification comprising a symbol **3404** is displayed in conjunction with an email from a work email account in this example, providing an additional visual notification to the LED visual notification **3406**. The gesture **3402** requesting display of the inbox is detected. An increasing amount of the inbox is displayed while display of the first information decreases in the window or frame where the first information **404** and the inbox are displayed. In this example, the gesture characteristic is a distance d from an edge where the gesture initiated. The inbox is fully displayed and active, as shown in FIG. **35**, and the first information is no longer displayed. The visual notifications **3404**, **3406** are discontinued. For example, the LED notification **3406** may be discontinued when the gesture characteristic is met, and the visual notifier **3404** may be discontinued when the email is opened.

In another example, the device may be in the state shown in FIG. **3** or FIG. **13**, when a weather application **404** is active. A message is received that results in providing a visual notification, such as via a light emitting diode (LED) visual notification **3606** as shown in FIG. **36**. In this

example, the most recently received message is for an application that is not supported by the inbox, thus detecting the gesture **3602** results in shifting or revealing of the visual notification icons **3604** and the inbox onto the display **112** as the first information **404** is shifted off the display **112**. A visual identifier or notification comprising a symbol **3404** is displayed in conjunction with an email from a personal email account in this example, providing an additional visual notification to the LED visual notification **3606**. The gesture **3602** requesting display of the inbox is detected. The visual notification icons **3604** are displayed while an increasing amount of the inbox is displayed and display of the first information **404** decreases in the window or frame where the visual notification icons **3604**, the first information **404**, and the inbox are displayed. In this example, the gesture characteristic is a distance d from an edge where the gesture **3602** initiated. The inbox is fully displayed and active, as shown in FIG. **37**, the visual notification icons **3604** are displayed, and the first information is no longer displayed. The panel of visual notification icons **3604** may be displayed in other ways. The visual notifications **3604**, **3406** are discontinued. For example, the LED notification **3606** may be discontinued when the gesture characteristic is met, and the visual notifier **3404** may be discontinued when the email is opened.

A method comprises displaying, on a display of an electronic device, first information and detecting a gesture on the touch-sensitive display, which gesture indicates a request to display an inbox associated with a plurality of applications. In response to detecting the gesture, when a message is received for a first application that is not one of the plurality of applications, a plurality of visual notification icons is displayed and at least part of the inbox is gradually displayed while reducing display of the first information along with movement of the gesture, wherein a first visual notification icon of the plurality of visual notification icons is associated with the first application.

A method comprises displaying, on a display of an electronic device, first information in a window and detecting a gesture on the touch-sensitive display, which gesture indicates a request to display an inbox associated with a plurality of applications. In response to detecting the gesture, display of the inbox is progressively increased while display of the first information is reduced along with movement of the gesture. When a message is received for a first application, when the first application is one of the plurality of applications, a progressively increasing amount of the inbox is displayed as the gesture continues, and when the first application is not one of the plurality of applications, a plurality of visual notification icons and at least part of the inbox is displayed, wherein a first visual notification icon of the visual notification icons is associated with the first application.

A method comprises displaying, on a display of an electronic device, first information; receiving, by the electronic device, a message; detecting a gesture on the touch-sensitive display, which gesture indicates a request to display an inbox; and in response to detecting the gesture, gradually displaying the inbox while reducing display of the first information along with movement of the gesture. When the message is not displayed in the inbox, a plurality of visual notification icons and at least part of the inbox is displayed, wherein a first visual notification icon of the plurality of visual notification icons includes an indication of the received message.

Previewing or displaying one image while displaying another in response to a gesture may include displaying the same side of each image, e.g., displaying the left sides, the right sides, the tops, or the bottoms of both images, while the opposite sides of the images are not displayed. For example, as the gesture continues, one side of the previewed image increases in size, e.g., more information is displayed in a larger area, while the opposite side of the image, the part that is not displayed, is reduced or decreases in size. Alternatively, the images may be placed end to end as the second image is displayed. Unlike progressing or sliding pages or pictures by swiping or flicking, previewing or displaying of one image while displaying another in response to a gesture as described herein provides control of how much of the second image is displayed, how fast the second image is displayed, and how long the second image is displayed or persists, including an option to quickly end the display of the second image by ending the gesture and an option to open or activate an application associated with the second image.

Previewing or displaying one image while reducing display of another image in response to a gesture is different from displaying an animation or cascading images onto a screen in response to a flick or swipe. Previewing persists the display of the previewed image or application in a controllable manner, instead of an animation or cascade that once started, runs to completion without being able to control what or how the images are displayed, e.g., the displayed is predetermined and unchangeable. Previewing may include statically displaying some information or part of one image in one area while the other image is dynamic or moves across another area of the display as the gesture continues. Described another way, the previewed image may be displayed beginning at one edge of the image, and the information that persists is being displayed stays at the same location on the display, although more information for the image is displayed as the gesture continues. The other image, which was displayed before the preview, may be dynamically displayed, in that the information of this image that persists in being displayed moves across the display, although less information for this image is displayed as the gesture continues. The total area in which the two images are displayed remains the same, although the area for each image changes, i.e., the area in which one image is displayed increases as the area in which the other image is displayed decreases. Typically, the amount of information displayed in the areas also changes, e.g., more information is displayed in the area that increases for the previewed image. The non-previewed image may be reduced by shrinking the displayed information, virtually covering, obscuring, or concealing the information or replacing it with the information from the previewed image, or any other method of reducing the information displayed for the image or application, such as described above.

In one example, a first quantity of information of a first image is displayed in a first area including a second area adjacent to a third area. In response to detecting a gesture, a second quantity of information of a second image is displayed in the second area while a third quantity of information of the first image is displayed in the first area, wherein the third quantity of information is a subset of the first quantity of information. As the gesture continues, the second quantity of information increases as the third quantity of information decreases. The second area increases in size as the third area decreases in size. The second image includes a second part opposite to the first part, and the second part of the second image is not displayed when the first part of the second image is initially displayed.

In another example, a method comprises displaying a first image in a first area, wherein the first area includes a second

area adjacent to a third area, wherein first information is displayed in the first area and second information is displayed in the second area, detecting a gesture, and in response to detecting the gesture, displaying a second image in the second area while displaying the first information of the first image in the first area. A size of the second area may be increased in size and more information in the second image may be displayed while the size of the first area may be decreased in response to movement of the gesture. Display may be static in one of the first area and the second area, and display may be dynamic in the other of the first area and the second area.

In another example, a method comprises displaying a first image on a touch-sensitive display, detecting a gesture, and in response to detecting the gesture, displaying a part of a second image and displaying a first part of the first image adjacent to the part of the second image and discontinuing display of a second part of the first image. More of the second image may be progressively displayed and displaying progressively less of the first image may be progressively displayed as the gesture continues to be detected. Display of the second image may discontinue when the gesture is no longer detected. Optionally, in response to detecting that the gesture meets a threshold, the second image is displayed and display of the first image is discontinued. The part of the second image may be displayed adjacent to a first edge of the touch-sensitive display. Prior to detecting the gesture, the first part of the first image may be displayed adjacent to a first edge of the touch-sensitive display, and, in response to detecting the gesture, the part of the second image may be displayed adjacent to the first edge and displaying the first part of the first image adjacent to the second image. The first image may include a second part of the first image opposite to the first part of the first image. As the gesture continues, an area of display of the part of the second image may progressively increase in size. As the gesture continues, an area of display of the first part of the first image may progressively decrease in size. An area of display of the part of the second image may progressively increase in size or decreases in size along with movement of the gesture. A quantity of information displayed in the second image may progressively increase in size or decreases in size along with movement of the gesture.

The first image and the second image may include any combination of information from applications, information elements of applications, and documents related to applications. The following are a few examples of image pairs. The first image may include an image of an inbox, and the second image may include an image of an email message. The first image may include an image of an email message, and the second image may include an image of an inbox. The first image may include an image of an attachment to an email message, and the second image may include an image of an inbox. The first image may include an image of an email message, and the second image may include an image of attachment to an mail message. The method of claim **36**, wherein the first image includes an image of an attachment to an email message, and the second image includes an image of an email message. One of the first image and the second image may include an image of an inbox including a plurality of notifications of messages from a plurality of different message applications. The second image may include one of an email message, a text message, a social network message, a phone message, and a calendar event message.

The above examples describe displaying a first application or image and previewing second application information or image, for example without opening the second application, or with an option to open the second application in response to detecting a gesture or characteristics of the gesture. The displayed selection items of a previewed application or image may be inactive (e.g., no function is performed when a touch is detected that is associated with a displayed selection item) or active (e.g., one or more functions are performed when a touch is detected that is associated with a displayed selection item). Alternatively, the selection items may initially be inactive and later change to being active. Optionally, different gestures or gestures associates with different edges or sides or corners may preview multiple different applications or images. For example, a gesture associated with the right edge previews a messaging inbox, a gesture associated with the left edge previews a calendar, a gesture associated with the bottom edge previews an address book, and a gesture associated with the top edge previews a user-selected application. The user may be provided with the option to assign the application with the desired edge or side or corner. Optionally, the side from which the gesture begins may hierarchically display, preview, or reveal related images. For example, a gesture beginning along the one side may preview images in one direction of the hierarchy, and a gesture beginning along the opposite side may preview images in the opposite direction of the hierarchy.

Although the method is advantageous for portable electronic devices due to the limited display size on a portable electronic device, such as a smartphone, the method may be applied to other electronic devices that have a larger display size.

Although the above examples illustrate various different features, the features of any example may be utilized with any other example unless the features conflict. For example, features of FIG. **2** through **11** or FIG. **23** through FIG. **32** or FIG. **34** through FIG. **37** may be utilized in a landscape orientation, and features of FIG. **13** through **21** may be utilized in a portrait orientation. Other features are interchangeable but are too numerous to identify briefly.

Detection of the gesture controls how much of the second image or application is displayed. For example, the detected location or movement of the gesture may control the size of the image or application information that is displayed, previewed, or revealed. Shifting, sliding, or scrolling of information or an image onto a display area generally includes gradually moving or progressively adding information or an image onto a display area. Shifting, sliding, or scrolling of information or an image off (of) a display area generally includes gradually moving or progressively removing information or an image from a display area. The shifting, sliding, or scrolling of second application information or a second image onto the display may cause shifting or scrolling of first application information or a first image off the display or may cover or replace the first application information or first image, such that the first application information or first image appears to be below the second application information or second image. The display of the information associated with a first application or first image may be reduced as the display of the information associated with the second application or second image is increased. The information associated with the second application or second image may shift onto the touch-sensitive display from a first edge of the touch-sensitive display while the information associated with the first application or first image shifts off a second edge of the touch-sensitive display, wherein the second edge is opposite the first edge. Icons or information other than the first application information or

first image may also scroll or shift onto or off of the display as the first application information or first image or the second application information or second image scrolls onto or off of the display, changes size, and so forth. The first application information or first image may be displayed from one edge of the device as the second application information or second image moves away from or is concealed beginning at the same edge of the device. The images or applications may be previewed or displayed as if each image or application is in a different layer and display of one or more of the images or applications is reduced to reveal the image or application in the layer below. As shown in the examples, the different images or information for different applications or application parts are displayed in separate, non-overlapping windows, frames, fields, or areas of the display. The windows, frames, fields, or areas are advantageously adjacent to each other, although they need not be adjacent. When the inbox does not contain a recently received message, a gesture may reveal the inbox and a plurality of visual notification icons, one of which indicates the application for the recently received message. The visual notification icons may be selectable to facilitate quickly opening the application associated with a recently received message.

The second application information or image that is previewed may be adjusted by the user. For example, the use may identify the quantity of information to be previewed, e.g., 10 latest unread emails, 5 most recently accessed contacts, and so forth.

Although the drawings show examples of location of various types of information, such as visual notifications or visual notification icons, the location and direction of information when previewed or peeked, and other locations, the information may be displayed in other locations or orientations than shown or specifically described herein. For example, visual notifications or visual notification icons may displayed along any side of the display, such as top, bottom, left, or right, in the middle of the display, in a ghosted or animated manner, or with other forms of visual presentation. Such information may vary when displayed in portrait or landscaped orientation. Information may be previewed or peeked in from any side of the display, including the top, bottom, left, or right sides. Touches such as gestures may be utilized having any suitable direction(s), shape(s), starting point, and/or ending point. Any of the examples described herein may be implemented in either portrait or landscape orientation.

The terms left, right, top, bottom, and so forth are utilized herein for purpose of providing a perspective for reference but are not otherwise limiting.

The present disclosure may be embodied in other specific forms without departing from its spirit or essential characteristics. The described examples are to be considered in all respects only as illustrative and not restrictive. The scope of the disclosure is, therefore, indicated by the appended claims rather than by the foregoing description. All changes that come within the meaning and range of equivalency of the claims are to be embraced within their scope.

What is claimed is:

1. A method comprising:

displaying, on a touch-sensitive display of an electronic device, a first information; and

in response to detecting a single swiping gesture on the touch-sensitive display starting from an edge of the touch-sensitive display in a first direction:

while the single swiping gesture continues moving in the first direction, gradually increasing a display of at least part of an inbox while reducing a display of the first information along with the movement of the single swiping gesture, the inbox supporting a plurality of applications and including information from the plurality of applications, the inbox being different than the first information;

while the single swiping gesture continues moving in the first direction, a notification indicator is displayed indicating one or more new messages are received;

in response to the indication of one or more new messages being received, determining whether a most recently received new message of the received one or more new messages is for one of the plurality of applications supported by the inbox;

in response to the determining that the most recently received new message is for a first application that is not supported by the inbox,

gradually shifting in a display of a plurality of visual notification icons in the first direction from the edge of the touch-sensitive display while gradually increasing the display of at least part of the inbox and reducing the display of the first information along with the movement of the single swiping gesture in the first direction, the first application being associated with a first visual notification icon of the plurality of visual plurality notification icons;

when the single swiping gesture meets a threshold, displaying the plurality of visual notification icons and the inbox without displaying the first information; and

when the single swiping gesture ends before meeting the threshold, displaying the first information and discontinuing displaying the inbox and the plurality of visual notification icons; and

in response to the determining that the most recently received new message is for a second application that is supported by the inbox,

progressively displaying more of the inbox as the single swiping gesture continues moving in the first direction without displaying the plurality of visual notification icons;

when the single swiping gesture meets the threshold, displaying the inbox without displaying the first information; and

when the single swiping gesture ends before meeting the threshold displaying the first information and discontinuing displaying the inbox.

2. The method of claim **1**, wherein the first visual notification icon is displayed with a visual identifier.

3. The method of claim **1**, wherein the plurality of visual notification icons is displayed in a sidebar along the edge of the touch-sensitive display.

4. The method of claim **1**, further comprising displaying the plurality of visual notification icons in response to detecting a characteristic of the single swiping gesture.

5. The method of claim **1**, further comprising displaying the plurality of visual notification icons when the gesture crosses the threshold on the touch-sensitive display.

6. The method of claim **1**, wherein the first information, the inbox, and the plurality of visual notification icons are displayed in one window on the touch-sensitive display, in response to the determining that the most recently received new message is for the first application that is not supported by the inbox.

7. The method of claim **1**, wherein the visual notification icons are selectable.

8. The method of claim 1, wherein the first information is associated with a third application, and the third application is at least one of a weather application, a calendar application, an address book application, a contact application, a media player application, or a home display page.

9. The method of claim 8, wherein the first information is an image including information of the third application.

10. The method of claim 8, wherein the inbox is associated with a fourth application, the fourth application is a messaging application displaying information of the plurality of applications that the inbox supports, and the fourth application is different than the third application.

11. An electronic device comprising:

a touch-sensitive display to display a first information: and

a processor configured to detect a single swiping gesture on the touch-sensitive display, wherein, in response to the processor detecting the single swiping gesture starting from an edge of the touch-sensitive display in a first direction, the touch-sensitive display is to:

while the single swiping gesture continues moving in the first direction, gradually increase a display of at least part of an inbox while reducing a display of the first information along with the movement of the single swiping gesture, the inbox supporting a plurality of applications and including information from the plurality of applications, the inbox being different than the first information, the inbox being different than the first information;

while the single swiping gesture continues moving in the first direction, a notification indicator is displayed indicating one or more new messages are received;

in response to the indication of one or more new messages being received, determining whether a most recently received new message of the received one or more new messages is for one of the plurality of applications supported by the inbox;

in response to the determining that the most recently received new message is for a first application that is not supported by the inbox,

gradually shifting in a display of a plurality of visual notification icons while gradually increasing the display of at least part of the inbox and reducing the display of the first information along with the movement of the single swiping gesture in the first direction, the first application being associated with a first visual notification icon of the plurality of visual notification icons,

when the single swiping gesture meets a threshold, displaying the plurality of visual notification icons and the inbox without displaying the first information; and

when the single swiping gesture ends before meeting the threshold, displaying the first information and discontinuing displaying the inbox and the plurality of visual notification icons; and

in response to the determining that the most recently received new message is for a second application that is supported by the inbox,

progressively displaying more of the inbox as the single swiping gesture continues moving in the first direction without displaying the plurality of visual notification icons;

when the single swiping gesture meets the threshold, displaying the inbox without displaying the first information; and

when the single swiping gesture ends before meeting the threshold displaying the first information and discontinuing displaying the inbox.

12. The electronic device of claim 11, wherein the touch-sensitive display displays a visual identifier to identify the first visual notification icon.

13. The electronic device of claim 12, wherein the touch-sensitive display displays the plurality of visual notification icons in a sidebar along the edge of the touch-sensitive display.

14. The electronic device of claim 12, wherein the touch-sensitive display displays the plurality of visual notification icons in response to the processor detecting a characteristic of the single swiping gesture.

15. The electronic device of claim 12, wherein the visual notification icons displayed by the touch-sensitive display are selectable.

16. A non-transitory computer readable storage medium comprising instructions that, when executed, cause a machine to at least:

displaying, on a touch-sensitive display of an electronic device, a first information; and

in response to detecting a single swiping gesture on the touch-sensitive display starting from an edge of the touch-sensitive display in a first direction:

while the single swiping gesture continues moving in the first direction, gradually increasing a display of at least part of an inbox while reducing a display of the first information along with the movement of the single swiping gesture, the inbox supporting a plurality of applications and including information from the plurality of applications, the inbox being different than the first information;

while the single swiping gesture continues moving in the first direction, a notification indicator is displayed indicating one or more new messages are received;

in response to the indication of one or more new messages being received, determining whether a most recently received new message of the received one or more new messages is for one of the plurality of applications supported by the inbox;

in response to the determining that the most recently received new message is for a first application that is not supported by the inbox,

gradually shifting in a display of a plurality of visual notification icons in the first direction from the edge of the touch-sensitive display while gradually increasing the display of at least part of the inbox and reducing the display of the first information along with the movement of the single swiping gesture in the first direction, the first application being associated with a first visual notification icon of the plurality of visual plurality notification icons;

when the single swiping gesture meets a threshold, displaying the plurality of visual notification icons and the inbox without displaying the first information; and

when the single swiping gesture ends before meeting the threshold, displaying the first information and discontinuing displaying the inbox and the plurality of visual notification icons; and

in response to the determining that the most recently received new message is for a second application that is supported by the inbox,

progressively displaying more of the inbox as the single swiping gesture continues moving in the first direction without displaying the plurality of visual notification icons;

when the single swiping gesture meets the threshold, displaying the inbox without displaying the first information; and

when the single swiping gesture ends before meeting the threshold displaying the first information and discontinuing displaying the inbox.

17. The non-transitory computer readable storage medium of claim **16**, wherein the instructions, when executed, further cause the machine to display a visual identifier to identify the first visual notification icon.

18. The non-transitory computer readable storage medium of claim **16**, wherein the instructions, when executed, further cause the machine to display the plurality of visual notification icons in a sidebar along the edge of the touch-sensitive display.

19. The non-transitory computer readable storage medium of claim **16**, wherein the instructions, when executed, further cause the machine to display the plurality of visual notification icons in response to detecting a characteristic of the single swiping gesture.

20. The non-transitory computer readable storage medium of claim **16**, wherein the instructions, when executed, further cause the machine to display the first information, the inbox, and the plurality of notification icons in one window on the touch-sensitive display, in response to determining that the most recently received new message is for the first application that is not supported by the inbox.

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